DOCUMENT RESUME

ED 298 280 CE 050 783

AUTHOR Schill, William J.
TITLE A Typology of Transition Based on a Synthesis of the Literature. Project TROPHY. Transition Research on Problems of Handicapped Youth.
INSTITUTION Washington Univ., Seattle. Coll. of Education.
SPONS AGENCY Department of Education, Washington, DC.
PUB DATE Jun 88
CONTRACT 300-85-0174
NOTE 74p.; For related documents, see CE 050 784-785.
PUB TYPE Information Analyses (070) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Adult Education; Career Education; *Classification; *Daily Living Skills; *Disabilities; *Education Work Relationship; Employment; Job Skills; Literature Reviews; Physical Mobility; Secondary Education; Vocational Education; Youth
IDENTIFIERS *Independent Living

ABSTRACT

This monograph synthesizes the research literature on transition from school to work and independent living for handicapped youth. The emphasis is on handicapped youth, but general literature is included where appropriate. The first part presents a short series of dramatized vignettes, based on fact. Summaries and syntheses are then provided on literature related to definition, vocational preparation, living arrangement, mobility, and correlates of employment. Part 2 of the monograph develops a typology of transition. These three main categories of elements of the typology are described: employment, living arrangement, and mobility. The typology is followed by a descriptive analysis of the subjects in a specific study that tests the viability of the Transition Typology for understanding relationships among the variables that may affect transition. Variables that may contribute to differential success of transition are then analyzed. A 12-page bibliography is appended. (YLB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED298280

A TYPOLOGY OF TRANSITION BASED ON A SYNTHESIS OF THE LITERATURE

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

TROPHY

CE050743

TRANSITION RESEARCH ON PROBLEMS OF HANDICAPPED YOUTH

UNIVERSITY OF WASHINGTON COLLEGE OF EDUCATION

TRANSITION RESEARCH ON PROBLEMS OF HANDICAPPED YOUTH

Contract Number 300-85-0174 RFP 85-107

William J. Schill, Principal Investigator

TYPOLOGY OF TRANSITION BASED ON A SYNTHESIS OF THE LITERATURE

June 1988

Transition Research on Problems
of Handicapped Youth
University of Washington
300 Miller Hall, DQ-12
Seattle, Washington 98195
(206) 543-6253

BEST COPY AVAILABLE

FOREWARD

The papers contained herein resulted from the research activities of the TROPHY staff. Additional copies are available in either printed form or on floppy discs from the address below.

The activities which led to the formulation of these papers were supported in part by the U.S. Department of Education (Contract 300-85-0174). However, the opinions expressed herein do not necessarily reflect the position or policy of the U.S. Department of Education and no official endorsements by the Department should be inferred.

William John Schill
Principal Investigator
Project TROPHY
300 Miller Hall, DQ-12
University of Washington
Seattle, Washington 98195

TABLE OF CONTENTS

	Page
SYNTHESIS OF THE RESEARCH LITERATURE ON TRANSITION FROM SCHOOL TO WORK AND INDEPENDENT LIVING FOR HANDICAPPED YOUTH	1
Introduction	1
Case Vignettes	1
Toward a Definition of Transition	4
"Transition" Overseas	5
England	7
Australia	8
Netherlands	9
Poland	10
West Germany	10
Summary and Synthesis of Literature on Definition	10
The Vocational Imperative	11
Approaches to Vocational Preparation	16
Employment Status	17
Summary and Synthesis--Vocational	19
Living Arrangement	20
Summary--Living Arrangement	24
Mobility	24
Summary and Synthesis--Mobility	24
Correlates of Employment	25
Summary	28
Discussion	29

Page

DEVELOPING A TYPOLOGY OF TRANSITION 30

Theories 30

Definitions of Transition 30

Elements of the Typology 31

Employment 31

The Employment Element in the Typology 32

Living Arrangement 33

The Living Arrangement Element in the Typology . . . 33

Mobility 34

The Mobility Element in the Typology 35

Combining the Elements in a Typology 35

Combining the Factors to Measure Transition 35

An Application of the Typology 35

Distribution of Handicapping Conditions of Respondents 37

Type of Employment for this Sample 39

Data on Job Employment Outcome 40

Current Living Arrangements 44

Summary 47

Analysis of Subject Pool Used for the Typology of Transition 47

100 Residual Cases 47

Familial Variables 47

Predicting Employment Status 49

Discussion of Prediction of Employment, Living and Mobility 51

Page

Analysis of the Function Structure Matrices 54

Selected Bibliography 56

SYNTHESIS OF THE RESEARCH LITERATURE ON TRANSITION FROM SCHOOL TO WORK AND INDEPENDENT LIVING FOR HANDICAPPED YOUTH

Introduction

The intent of this monograph is to synthesize the research literature on transition. The emphasis is on handicapped youth, but general literature is included when appropriate. The need for an analytical tool, such as the Typology which concludes this paper, is readily apparent from the strengths and weaknesses of the literature in the field.

To give the uninitiated reader a feel for handicapped youth in transition, a short series of dramatized vignettes, based on fact, is presented. The authors have taken limited artistic license to give the data a more human quality.

Case Vignettes

Abbe took a twenty dollar bill and three quarters from the desk drawer where her dad kept the family's ready cash. The quarters were for the bus and the bill would cover whatever she ordered for lunch. At 22 she had learned to ride the bus in her community and knew what change she needed. Lunch presented a different problem. She never quite understood the various prices for meals, but she knew that $20 always covered the costs and she would get change in return.

Since leaving high school in 1985 she had enrolled in a class offered by the local community college. It was in this class that she learned to ride the bus and she also made friends with three other girls of about the same mental capacity. The visits to restaurants, in preparation and execution, provided their joint recreation and consumed a great part of her day.

Her family was well-to-do and, unlike many other families with retarded adults, did not see an immediate need for her to search for a job. They recognized that the economic return from any job she might be able to handle would be minimal. That hurdle, if it ever had to be leaped, would be well in the future. They were delighted by her ability to get around on her own. That was sufficient adult behavior for now.

Bette was determined to stick with the program at Galladet College until she received a degree, although contact with the large number of hearing impaired people was stifling to her. She

spoke without the distortion of those who had been deaf from birth and was able to read lips sufficiently well to meet strangers. These skills enabled her, upon her return home, get a job as a receptionist at a first class restaurant. To the delight of Bette and her family she was now interacting with people who were spread across the whole range of human abilities and handicaps. Her friends were mostly without noticeable handicaps which to her and her family meant that, with her modest apartment and her full time job, she had made a complete transition to independent adulthood.

Colleen, unlike Bette, had six years of full-time work during which she interacted with a wide variety of adults. She had been self-supporting, independent in her living style, but not fully satisfied. Word processing was a drag. She elected to attend Galladet even though it meant her father would have to contribute a thousand dollars a month for her support. In terms of transition to independent adulthood she was regressing, but she would, after several years of study, become a capable counselor for others with similar hearing impairments. Working had been an educational experience and it had taught her that there should be more to a job than the wages and more to one's productive activity than satisfying others. There was a need to satisfy oneself.

David existed, to be sure, but the agencies and institutions would not find him. The address he had used while in high school was invalid. His parents, when they were together, lived in low cost public housing and existed on welfare. He had few adult models who were successful and most of them were repugnant because they represented social agencies from law enforcement to case workers. Each seemed to hassle more than help. Networking to find a job was a concept he not only wouldn't understand, but if he had understood, he would have had no one with whom to network. Survival was the name of the game. He had managed to get around most of the high school hassle by merely becoming identified as learning disabled.

Now, without academic, vocational, or social skills, he had to rely on street knowledge. Part of this said you never permit anyone to include you in the myriad of follow-up studies being conducted by the schools and social agencies. Long ago he had learned from family and friends not to give out telephone numbers or addresses. It provided good protection from credit agencies and other nuisances.

Edie knew she had profited from the classes for the learning disabled. She had a hard time learning some subjects and especially arithmetic, but she had mastered it. Her ability with the basic arithmetic skills was all she needed on either of her two jobs. Being a waitress at one place and

receptionist/cashier at another kept her very busy. Neither employer wanted her to work full time and she understood why. There were no benefits such as sick leave or paid vacations, much less health insurance, but this was a start and she knew she would be a success.

Since her dad's death she had lived with her mom in a small apartment. Because they owned the building, they could have had a better apartment, but that would have increased their expenses. Living with her mom had many advantages. She could save most of a her wages and she didn't get too much trouble from the guys who liked her China-doll looks. She knew when she went home that no one would be waiting to pay her unwanted court. She selected her friends carefully and none of them were learning-disabled. She was on her own in every way she wanted to be, and was protected by family in those ways she elected.

Fred felt trapped by his job, his wife, and their baby. Here he was only 21 and already he had obligations that would last forever. He had been led to believe, by the vocational assessment counselors, that if he was able to find full-time employment he would be one of the more fortunate.

His job at the airport consisted of filling trays with food to be loaded aboard aircraft. The eight hours every day seemed like an eternity, but it was full time and, if he didn't screw up, he could look forward to continued employment. His label as mildly mentally retarded had long since been forgotten, as the crew with whom he worked changed every few weeks. The discussions with fellow workers, as they passed through, led him to believe that they all hated the job more than he, but they left and he was still there. What kept him going was the thought that one day he would be promoted to supervisor.

George maneuvered his wheelchair out of the back seat, opened it and levered himself into it, a capability it had taken years to develop. The schools and his parents worked ceaselessly to improve his self-reliance, but his existence still required that his parents work different shifts so someone would always be in attendance.

When he worked his two hours a week at the laundry, his feelings were mixed between being glad to be somewhat on his own and being lonesome for his folks. The boss, a close friend of his mother's, was good to him, but he was still uneasy. It bothered him that, often when he was struggling with the enormity of picking up scraps to drop them into a garbage bag, passers-by would swiftly scoop them up and hand them to him, smiling. He would thank them for their kindness, but it hurt to realize that anyone with normal physical and mental capabilities could clean up the place in a few minutes, while it took him hours. He wished he was home watching the tube.

Helene wept after the interviewer left. The first interview six months earlier had been fun. They sat at a table in the sunshine on the patio of the workshop for the blind and talked. She had told him about her room at the boarding house, her personal phone, and the enjoyment she felt at living on her own. Without chagrin, she described her job as a power sewing machine operator.

The second interview was different. He had sat next to her in the workshop while she sewed selvedges on dishcloth after dishcloth. He now knew how stupid her job was, and she had to admit that living alone didn't work out. She couldn't afford to live away from the family. She had moved back home.

Toward a Definition of Transition

The word "transition," now widely used is the one well-established term in use among professionals to encompass movement from youth to adulthood. The writers of this paper accept the term transition to mean a continuing process of movement toward independent adulthood. In some cases, for the handicapped and the non-handicapped alike, this process may go on for years. Definitions of transition also abound in the literature of special education. If non-handicapped youth find transition problematic, how much more stress is experienced by those who have a handicapping condition?

In western societies, the concept of adult status embraces all those factors which contribute to one's ability to become a member of the work force, and ultimately to gain self-sufficiency. To achieve full adult status, one's earnings should cover, at least, the costs of room, board, clothing, and transportation. For many individuals, however, the transition from youth to adulthood is not clearly demarcated. For example, some individuals who are not now employed do maintain adult status because they qualify for welfare which pays for room and board. Under the best conditions, youthful dependence should yield to adult status. However, many individuals cannot or do not progress as expected.

The term "transition," meaning the movement from childhood to adulthood, appears in the literature prior to the 1960s as evidenced by Cohen (1964). A landmark publication (Hill, 1969) focusing on the transition from school to work and using an interview format studied 162 children's changing perception of work from the early age of 7 through 18. Among the 16 to 18 year group, Hill found a greater turning toward the external world and a strong tendency for emphasis to be placed on the social values of work. The school to work transition produced anxiety in the individual, the teacher and parents. Transition to them represented a test of the value of earlier preparation. The ideal school leaver chose a career in accord with a major

academic interest. Other leavers found considerable difficulty in dovetailing the world of school into the world of work.

In spite of a common core of anxiety and stress characteristic of youth in the process of transition, youth evidenced the beginnings of finding their way in an adult world and of experiencing some hope and confidence in their capacity to meet its challenge. Successful youth had developed a strategy of approach to work and made strides toward occupational maturity. In a compilation of definitions of transition, Judy-Arin Krupp (1987) used a definition that combines the work of Bridges (1980) and Schlossberg (1984).

> A transition is a natural process of disorientation and reorientation, caused by an event or nonevent, that alters the individual's perception of self and the world, demands a change on assumptions or behavior, and may lead either to growth or to deterioration; the choice rests with the individual.

Several articles treat the changes within transition which generally include three stages: new beginnings, a neutral zone, and an ending. "These stages occur in any order, take time, sometimes overlap, and bring their own problems and joys" (Krupp, p. 4, 1987).

In 1970, Garbin, Salamone, Jackson and Ballweg focused on the adjustment problems of young workers facing the transition from school to work. They contended that the quantity and rate of socio-cultural change in the United States had been responsible, at least in part, for producing numerous incongruities between the "social-psychological-technical attributes of individuals and the skill demands of the labor force" (p. 5). In their analysis, they concluded that a large number of persons would be consigned to live in a society neither able to contribute in proportion to their human potential nor to receive in proportion to their need. Garbin et al. (1970) in discussing Lasswell's (1965) treatment of the transformation from youth idealism to adult realism reminds the reader that:

> The worker's occupational role influences not only his work activities, but also his prestige, and his sense of belonging. The worker's social class position, more than any other factor, is affected by the type of work he does. His social class position, in turn, influences the life style of his immediate family, its health and longevity, the use of its leisure time, its social participation patterns, its political and religious behavior, its marital stability, its social values and attitudes, and innumerable other factors which are markedly influenced by the nature of the occupational

> pursuits of the breadwinner. (Garbin et al., 1970, pp. 9-10)

Some years after the Garbin et al. report (1970), Scharff and Hill (1976) published their study emanating from the Center for Applied Social Research of the Tavistock Institute. The authors, using an interview format, described the transition from school to work as a crucial stage in life of which a person brings together his internal resources and those gained from adults at school and home to make the first major independent choice which has lasting implications for the future. Scharff and Hill characterized the transition as requiring young people to cope with "the personal turbulence inseparable from adolescence, while at the same time experiencing an abrupt change in their institutional environment" (p. 68).

In a monograph the educator-philosopher Eli Ginzberg (1980) explored why transition is so difficult for some groups of young people and relatively easy for others. Ginzberg directed his focus toward the interfacing between the school and the world of work and how each is affected by the family and the larger society. A concluding section sets forth a list of recommendations for improving the transition from school to work.

Focusing on students with disabilities, Will (1983) posits a conceptual framework of transition as encompassing tree bridges from school to work; transition without special services; transition with time-limited services, such as vocational rehabilitation and postsecondary education; and ongoing services that buttress disabled persons as they seek to take advantage of work opportunities. She encourages a compilation of careful descriptions of transition experiences as a means to better understand the process.

The National Longitudinal Transition Study of Special Education Students provides the most recent data from a nationally representative sample (Wagner, 1988). This study describes 1985-1986 special education secondary students who were classified as having some learning disability. The averages of the youth is 17.3. Included is information concerning the living arrangements, vocational services received and employment of learning disabled youth (Wagner, 1988).

"Transition" Overseas

The international literature gives the general impression that the transitional problems for youths with handicaps are not the focus of concern in countries other than Australia, England, and the United States. Very few countries are actually writing about transitional problems and solutions. In a report from Sweden about adaptation of work sites, for example, the reporter

identified one of the needs as for "people with disability about to enter employment," but did not distinguish youth in transition from other age groups. The word "transition" used with the same meaning as is accepted in this report appears only in reports from Australia. However, in one report from England, the phrase "transferring from school to work" was used, which indicates that some attention has been paid to the problem.

England

In Great Britain, the policy on the employment of people with disabilities has tended to assist disabled persons to adapt to the existing job market rather than to attempt to gain concrete concessions from the employers. An important part of the reason for this may be budget constraints. As a result, the British government has adopted cost-cutting measures such as: (1) integrating disabled people with the general placement programs for able-bodied job seekers; (2) offering less intensive services; (3) requiring disabled people to assume greater responsibility for locating and securing employment; and, (4) attempting by education to change employers' attitudes toward hiring handicapped people. These policies have affected the services for handicapped people in Great Britain.

The work by West and Newton (1983) reported on school leavers in Britain and investigated a range of aspects of transition from school to work by examining adolescents' experiences and attitudes at selected points in their transition period. The authors built on the body of research in Britain including that of Carter (1962) and Maizels (1970). The latter study had found wide discrepancies between the need of and opportunities for youth facing transition. Maizels interviewed, retrospectively, 330 youths who had left school in the previous three years and were employed in London. She also conducted interviews with employers to obtain data for a congruence of the views. West and Newton (1983) critiqued the Maizels (1970) methodology on basis of the retrospective interview and the lack of a longitudinal framework.

Transition was defined by West and Newton (1983) as a period six months prior to the date of leaving school, to 30 months after the date of leaving. Accordingly, they first interviewed 174 pupils prior to leaving school and again nine months into their working life. The final interview took place after 30 months of working life yielding longitudinal data for 154 of the original 174 respondents. Among the findings of West and Newton were that schools can do much to influence expectations and attitudes toward work; the entry into working life of young people is poorly understood; and, females consistently have unfavorable experiences when leaving school and starting work.

Australia

According to the Australian Bureau of Statistics (ABS), a 1981 survey indicated that 1,941,000 people in Australia were handicapped--13.2% of the population, 94.1% living in private households and the rest in institutions. The ABS survey also indicated that 95% of handicapped school-aged children in institutions were severely handicapped and all were in special education, while over 80% of the handicapped school-aged children lived at home and all attended regular schools. But many of these children did not reach or proceed very far through secondary schooling. Little progress has been made in reeducating secondary and post-secondary school teachers in dealing with the educational problems of handicapped students. Although all handicapped children have reasonable equality of educational access and opportunity, as the federal government mandated, post-secondary education has assisted mostly people with certain types of handicapping conditions, e.g., hearing and visually impaired and orthopedically disabled. Very little has been done for the groups which experience the greatest difficulties in entering the work force, i.e., those with mental handicaps. It was also realized that there is a need to provide more rigorous evaluation systems to monitor programs designed to assist young disabled people in making the transition from school to work.

Low and Crawshaw (1985) conducted interviews with forty youth in Melbourne who were both homeless and unemployed. They postulated that the existence of a social mechanism that included reduced public expenditure on housing, rising unemployment and an acceptable policy of exclusion of homeless youth from receipt of services as a cause of poor transition possibilities for youth and served only the needed interests of the powerful.

Accordingly, efforts have been made in Australia to integrate Mildly Intellectually Handicapped (MIH) school leavers into the community through normal competitive employment. Some recent studies reported by Mann and Gregory (1981) have identified four factors influencing success in the transition process:

1. The study found no convincing evidence of relationships between success and factors such as intelligence and school achievement. Elements such as race, sex, and age affect MIH as much as non-handicapped people. Specific job skills are less important than good behaviors, e.g., punctuality, application, response to supervision, sociability, appearance and personal hygiene. Behavior rather than skills for daily work was the factor that determined the employability of the mentally retarded individuals. Employers who hired MIH workers, both in private and public sectors rated desirable qualities as: willingness to undertake low-level, unattractive, boring and

dirty jobs; stability and low turn-over rates in such jobs; and, ability to achieve good punctuality, attendance and safety records. The disadvantages listed by these employers were: longer periods of induction training than were necessary for normals' attention span and memories; and, the commonly observed presence of defective gross and fine motor skills.

2. The cutting edge of employment policies was represented by the personnel staff who recruited applicants, and the line management staff who accepted or rejected them for specific jobs. It was at this level that personal attitudes and prejudices had practical effects on MIH's employment.

3. Most of the jobs taken by MIH young people entering the work force are categorized "unskilled," and a large proportion of them are factory jobs requiring only minimum on-the-job training. The study also reported that many of the slightly better quality jobs (e.g., nursing aides, storemen and packers, shipping and material handling, and service industries and food catering services), in which the MIH are often employed in the United States, are regarded by Australian employers as unsuitable for MIH because the level of training required is assumed to be too high.

4. Job market changes and technological advancement had a visible effect on MIH employment. Although studies of employment success or longitudinal studies have rarely been related to any suitable economic indicators, the authors suggested that economic recessions as well as technological advancement, which often eliminate unskilled manual jobs, are likely to affect the MIH workers before most others.

Suggestions made to facilitate a successful transition for MIH youths included incentives for employers, identifying suitable jobs, improving job environment, sheltered work and its supervision, and education objectives. The interesting and unique point these authors have made is, on the one hand, to promote conventional employment work for MIH's and to prepare them for it; on the other hand, to encourage the development of informal work for MIH's without employment.

Netherlands

In the Netherlands, all those who cannot be placed in private employment are referred to Social Employment, which is of three types: industrial workshops, open-air projects, and clerical projects. The first and the third do subcontracting with private sectors as well as with primary manufacturing, and they also do office work for public agencies. The open-air projects are all public, mostly in municipal parks. As in normal industry, these handicapped people's wages are negotiated with unions. Those whose productivity is below 30% receive 70% of

the normal beginning scale for a trial period of one year. If they do not reach 30%, they are referred to day care centers.

Poland

In Poland, as reported by Habeck, Galvin, Frey, Chadderdon, and Tate (1984), disabled people are adequately served by the cooperative movement, and thus there is little incentive to integrate them into non-sheltered sites. The Invalids' Cooperatives (essentially a version of sheltered workshops) are firms operating autonomously, neither government owned nor run, rather they are managed, operated and staffed mainly by disabled persons who are represented throughout the firm's hierarchy. A minimum of 70% of its employees must be disabled in order for the firm to be designated as an Invalid's Cooperative.

West Germany

The focus on services in West Germany (Kallen, 1980) has been to assist the family of the handicapped to provide medical, social, and occupational help for its members.

The single most important fact to come from the transition reports in the international area, as Noble stated in his 1984 study on employment in the context of disability policy, was that a very broad group of people from all parts of the world, socialist and capitalist countries alike, agreed that when effective vocational and other rehabilitation programs are present, costs of effective transition are less.

Summary and Synthesis of Literature on Definition

Apart from the British and Australian experiences, there is little correlation between transition problems and policies in the U.S. and those in other countries. In part the dissimilarities are rooted in differing interpretations of "transition," in the basic divergences in the social structures of other countries, and, in some cases, in the failure to separate the study of handicapped youth from that of adults.

The literature of transition from school to work and to independent living is replete with differing definitions of the problem. One fundamentally complicating factor is the wide variety of research methods used and the most common source of data; it is the easiest and most convenient if not the cheapest. But the rate of return in most of the questionnaire studies in this field is so low as to make any useful analysis highly questionable. It is difficult to draw a valid definition, applicable over a broad spectrum, if samples are so small as to be insignificant.

Moreover work itself is most often poorly defined or left undefined and may include volunteer activities in some cases and sheltered workshops in others. Seldom is there reference to the hours worked or the rate of pay. The notable exceptions in which work is operationally defined include the works by Hasazi et al., Mithaug et al., and Wehman et al.

More often than not, studies of the post-school working behavior of handicapped youth do not include other pertinent variables such as living arrangements and prior school experiences. These elements are essential ingredients in any meaningful definition, especially of a social phenomenon as complex as transition for handicapped persons.

Reviewing competitive employment from an international perspective, Bordieri and Comninel (1987) concluded that several other industrialized nations had more effectively used quota systems, government grants, and tax credits to employers, and government wage subsidies than had the United States. Major changes in the policy for disabled workers would be required if the United States were to incorporate these international approaches to competitive employment.

The Vocational Imperative

Since complete community integration of an individual is dependent on whether that person is competitively employed, vocational preparation assistance in the transition from school to work is recognized as a vital need of the handicapped. But the real value of that preparation lies in the use that's made of it when the student reaches the crucial point of transition--entry into the job market. Some of the data obtained from broad-based studies in this area is disquieting. Factors associated with the employment status of handicapped youth were investigated in a sample of 462 youths from nine Vermont school districts by Hasazi, Gordon, and Roe (1985). All students from these districts who left high school between 1979 and 1983, and who had been receiving special education services, were identified. Interviews were conducted with 301 youths to solicit current employment status, employment and training history, and use of social services. Additional information regarding educational history, age, and community demographics was obtained through individual student records. Employment outcomes were found to be related to secondary vocational and training experiences, controlling for geographic location, gender and level of functioning. Results indicated that: (1) over half the sample were employed, (2) that most of the youths found jobs through the self-family-friend network, and (3) that part-time or summer work during high school were predictors of percentage of time employed since high school and of current wages. These findings were discussed in terms of their

implications for researchers, service providers, and policy-makers.

The study by Hasazi, Lawrence, Roe, Hull, Finck, and Solembier (1985) investigated the employment and residential status of 243 mentally retarded youths who had left high school in Vermont between 1981 and 1983. Information was solicited from school records and through telephone interviews, and included vocational training history, employment history, social service utilization, and residential and marital status. The results indicated that: (1) certain vocational and educational experiences during high school were related to employment status and salary level following high school, (2) employment rates remained stable across rural, urban and metropolitan areas, and (3) the majority of employed youths found their jobs through their self-family-friend network. The findings were compared with those of an earlier study of a cross-categorical sample of handicapped youths. The analysis and reporting of results in this paper closely paralleled the presentation in Hasazi et al. (1985). Gender was found to be significantly related to current employment status, as was disability classification in high school. There was no significant relationship between current employment status and manner of school exit. There was marginal association between current employment status and vocational education. Higher wages were associated with having one or more vocational classes in high school and having held a part-time outside job during high school.

According to Bellamy, Rose, Wilson, and Clarke (1982), the vocational preparation of the severely handicapped is similar to that of other groups. That is, vocational instruction must emphasize skills that are marketable. Identifying viable skills for a marketplace requires knowledge of the local economic needs and a reasonable prediction of future change (Alper, 1981; Bellamy, Rose, Wilson, & Clarke, 1982; Mithaug, 1981). One way to secure such knowledge is by social validation. For example, Rusch, Schutz, and Agran (1982) analyzed data from questionnaires sent to potential employers. The respondents suggested 70 survival skills necessary for entry into competitive employment. To be considered for employment, both severely handicapped and other persons would need to possess those entry level skills considered necessary by the potential employer (the social validators).

Researchers and service providers are increasingly demonstrating the effectiveness of training disabled persons in more naturalistic environments. Community-based training and employment projects have shown that the work of developmentally disabled persons fares well when compared with the work of their non-handicapped peers when certain factors are met. Stodden and Browder (1986) outlined factors contributing to the successful participation of developmentally disabled persons within

competitive employment settings. These success factors were generated in the areas of (a) training approach and methodology, (b) program management, and (c) trainee characteristics. The training approach and methodology which brought about successful results was a holistic approach to service delivery. Success in employment depended in large part upon the attention given to trainee's needs in other life areas. Networking with other community resources to enable the project to provide comprehensive services without incurring the cost or staff responsibilities proved to be a cost-effective approach. The second factor related to employment success, program management, directed staff to network with other service providers and community resources in providing comprehensive services for trainees. Project staff assisted trainees to obtain medical, psychological, educational, financial and transportation support services, and cut through confusing red tape. Trainee characteristics related to employment success were described in terms of three key variables: (1) work motivation; (2) support from home or significant others; and (3) work history.

Supported employment was introduced as an opportunity for students with severe disabilities to make the transition from school to competitive employment rather than sheltered employment settings while receiving the necessary ongoing support needed for job retention (Will, 1984). According to Rhodes (1985) and Wehman (1986), there are four minimal requirements for supported employment: (a) employment (most literature specifies paid employment), (b) work in an integrated setting, (c) presence of a severe disability, and (d) requirement and availability of ongoing support.

In accordance with the increasing emphasis on skills that are directly applicable to employment situations, Clarke, Greenwood, Abramowitz, and Bellamy (1980) tried to effect a realistic instruction pattern with CETA (Lane County Oregon, Comprehensive Employment and Training Act) services to provide community-based work experiences to moderately and severely handicapped high school students. Nine students learned a variety of community jobs and earned an average of $950 for their summer work. In addition to change in performance of handicapped students, the project noted change in the attitude of parents towards their teenagers. Overall the project was successful in providing remunerative work experience to a population of students which has been historically denied such vocational opportunities.

In 1974, the Placement and Job Development Department at the Institute of Rehabilitation Medicine in New York designed and implemented an on-going summer employment program in the private sector (Hunter & Zuger, 1979). The intent of the program was to provide severely physically disabled high school and college students with meaningful paid work experiences, and the opportunity for integration into the normal work environment, as

well as to skills, work habits, and knowledge of jobs. Pilot study findings supported informal evidence that the program affected the vocational development of the participants. Among the findings seen as the most important and significant by the authors was the participants' greater confidence in their vocational abilities.

It is consistent with the current trend in the vocational rehabilitation literature to examine the preparation of handicapped persons for non-sheltered, competitive employment (Alper, 1981; Bates & Pancsofar, in press; Schutz & Rusch, 1982; Wehman, 1981). Similar to the earlier research in sheltered workshops, current research also employed operant principles. It concentrated on service occupations such as janitor (Cuvo, Leaf, & Burokove, 1978), kitchen helper (Schutz, Jostes, Rusch, & Lamson, 1980) and elevator operator (Wehman, Hill, & Koehler, 1979). By teaching outside the work environment, it was possible to highlight the need for better methods to promote maintenance and generalization (Connis & Rusch, in press; Horner, McDonnell, & Bellamy, in press).

Within the last decade there has been a renewal of interest in the idea that the demands of adult life and post-school environments should form the basis of curricula designed for secondary level students (Williams, Vogelsberg, & Schutz, 1985; Sailor & Guess, 1983; Wilcox & Bellamy, 1982; Brown, Branston-McClean, Baumgart, Vincent, Falvey, & Schroeder, 1979; Brown, Nietupski, & Hamre-Nietupski, 1976). Williams et al. (1985, p. 103) describe the ecological model as having seven steps:

(1) Delineating potential post-school work, recreation, and educational environments and service options;

(2) Interviewing students, parents, guardians, and teachers to delineate priority post-school environments and service options;

(3) Determining performance requirements of specific post-school environments and procedures for accessing services;

(4) Using the determined performance requirements of post-school environments as the basis for assessing students and delineating possible curriculum and IEP objectives;

(5) Performing other assessments (not necessarily tied to the specific post-school environments being targeted) to ensure that all skills which may be of value to the student are being considered;

(6) Utilizing the IEP process and consultation with students, parents, guardians, teachers, and support staff to finalize specific post-school environment objectives for the student.

(7) Developing and implementing strategies for facilitating the transition of the student to post-school environments.

The seventh step in the Williams et al. (1985) outline seems a bit vague. As noted by Brinker (1985), however, the actual development and implementation of the instructional plan to achieve transition usually follows a traditional task-analytic/operant approach (see also Brown, Falvey, Baumgart, Pumpian, Schroeder & Gruenewald, 1980).

In the National Transition Study (Wagner, 1988) employment characteristics of in- and out-of-school learning disabled youth were compared to "other" youth. There were no significant differences between LD youth and "other" youth in percentages of competitive employment for both in- and out-of-school youth. Significant differences were evident only in the type of jobs and the average wages obtained by byouth. For example, only 9.7% of in-school LD youth compared to 26.9% of "other" youth had worked in child care and babysitting type jobs. The authors contend that these difference might reflect the high number of males in the Learning Disabled groups. In the Manual Labor jobs (i.e. cleaning and janitorial jobs), 25% of LD in-school youth had reported working in this area versus only 7% reported for "other" in-school youth. In addition to differences in th types of jobs, the average hourly wage earned by learning disabled youth (both in-and-out of school) was reported as $2.65 compared to $3.18 earned by "other" youth.

In comparing employer and teacher identified entry-level job requisites of service occupations, Alper (1985) compared the level of agreement between employers and classroom teachers of secondary level severely handicapped students as to employment requirements. The data obtained indicated strong agreement between employers and teachers surveyed on the skills thought to be necessary for competitive employment. Twelve skills were agreed upon as important by 90% or more of both groups. These items included: recitation verbally upon request of full name; communication of such basic needs as sickness and pain; maintenance of proper grooming by cleaning self before coming to work, maintenance of personal hygiene by using deodorant; appearance at job on time and without prompting; and safe movement about work areas by paying attention to where they were walking.

Approaches to Vocational Preparation

Some attempts at model building and training programs in vocational preparation are reviewed. A comparison of the Job Club method with an alternative method was made using 154 clients who had job-finding problems, such as physical, emotional, intellectual and social handicaps, or long-term unemployment. In six months, 95% of the Job Club clients obtained jobs versus 28% of the comparison group. The jobs of the Job Club clients paid 22% more (median), were obtained sooner, were maintained, and required a median of five sessions and five interviews. The results suggest that virtually all handicapped or long-term unemployed persons could obtain and retain a job under an intensive Job Club program (Azrin & Philip, 1979).

A vocational counseling tool, the Career Time-Line, has been used effectively in Nigeria and is proposed for use in the United States for assisting in the formulation of realistic career goals. An advantage appears to be that the tool helps counselors work effectively with large populations of students (Oleksy-Ojikutu, 1986). Basically the procedure consists of the youth drawing a baseline graph indicating a specific transition time. Each draws in major events (personal and other), and steps toward career and vocational training in an attempt to consider the potential interaction of personal and career goals. School and work experience staff can use the Career Time-Line to identify present problems and prepare adolescents to meet future difficulties.

Another model program, Providing Realistic Opportunities for Gainful Rehabilitative Employment Success in Society (PROGRESS), ties on-the-job training to job placement and analyzes each student's job to established curriculum goals to be accomplished in school and on-the-job, and, uses training procedures to ensure the gradual withdrawal of support as the student becomes more competent on the job. The model program (Schloss, McEwen, Lang, and Schwab, 1986) although relatively new, has support of employers and workers and appears to be a viable approach for ensuring the transition of handicapped students from school to work.

Bourbeau, Sowers, and Close (1986) likewise studied the effectiveness of curriculum in school to generalized performance beyond school. Four mildly mentally retarded students were taught banking skills and their performance was measured in the classroom, at the bank for which the curriculum was designed, and at another bank in the community. Performance of all students indicated that they were able to generalize newly trained skills to real community settings.

Noting that 75% of failure to retain employment could be attributed to poor co-worker and supervisor relationships, reviewed the two major training approaches related to this issue: the skills deficit model and the inhibition model. The subject pool consisted of 40 individuals enrolled in a vocational training program. Their mean age was 23 (range 17 to 50); mean grades completed was 11; most were single (82.5%); and, the distribution of primary disabilities was 52.5% mental, 25% orthopedic, and 25.5% of other or unknown etiology. One intervention combined the skills deficit and inhibition models and focused on teaching social and self-presentation skills for various phases of transition. The other intervention was based on the skills deficit model designed to teach social and self-presentation skills to be applied in job interviews.

As expected, the intervention based on the combined models permitted greater generalization of appropriate social behavior to the training area. The intervention focused on developing interview skills failed to generalize beyond that limited sphere. The data appear to support the superiority of an intervention program that combines both skill deficit and inhibition models of social skills training in that skills are generalizable, incorporate, affect, broaden aspects of the person, and assist individuals in drawing conceptual relationships between their behavior and outcomes. Farley and Akridge (1987) reach similar conclusions.

In an argument for community-based vocational training (Wershing, Gaylord-Ross, C., & Gaylord-Ross, R., 1986) the benefits to be derived by disabled youth as well as procedures necessary to implement the training are set forth. The community-based vocational training programs in selected California school districts have permitted students to advance from the supervised nature of the classroom and central site training to independent functioning in work experience or to supported employment programs. The authors reiterate that community-based programs better prepare handicapped youth for adult employment and have increased the likelihood of job retention.

The National Transition Study (Wagner, 1988) examined services received by learning disabled youth. Vocational services included but were not limited to job counseling, job training, and job placement services. Of all learning disabled youth surveyed, approximately 34% had received some type of vocational service. These preliminary results further indicated that the school system (primarily secondary schools) provide up to 75% of these services (Wagner, 1988).

Employment Status

Data from two broadly based studies concerning vocational

adjustment of educable retarded persons were examined by Halpern (1973) with respect to the presumed inverse relationship between adverse community economic conditions and employment opportunities for retarded workers. The data suggested that retarded persons were not automatically the losers during times of economic hardship. Mentally retarded individuals were assisted by well-structured vocational training programs and were found to have a good chance in locating jobs regardless of the level of general community unemployment.

To properly prepare individuals with handicapping conditions to enter the job market, past and current employment practices must be analyzed with a future perspective. The current national economic structure is in a state of transition from the Industrial Age to the age of information processing (Linari & Belmont, 1986). In terms of projected employment changes, high technology industries should experience significant growth, but the largest demand for workers is anticipated in the retail trades, followed by business services, new construction, and eating and drinking establishments (Kutscher, 1984).

The U.S. Department of Health and Human Services in 1982 estimated only 14 percent of adults of working age with severe disabilities are employed in the nation's labor force, and only 2 percent in a full-time capacity. In a five-year longitudinal study of 108 handicapped youth in a rural community-based job exploration program, Schalock, Wolzen, Ross, Elliot, Werbel, and Peterson (1986) found: 63% employed (defined as three months of uninterrupted work); and 25% unemployed: with the remainder in school (6%); mental retardation programs (5%) or prison/mental health facility (2%). The predictor variables of employment and living arrangement were students' handicap, family involvement, days absent during school, gender, and vocational programs. Likewise in a 12-year follow-up study of 225 former clients of a rehabilitation center, Bolton, Rowland, Brookings, Cook, Taperek, and Short (1980) found slightly more than 56% of the ex-clients were working. Employment status was found to be a function of age and sex: some 98% of the younger clients, as opposed to middle and older groups (aged 35-58 and 60-86 respectively) were single, lived with parents or relatives, and had no dependents. The proportions of males working in the three age groups were 80%, 45%, and 10%, respectively; the corresponding proportions for females were 55%, 24%, and 0%.

Schalock (1986), looking at the status of the handicapped youth, found 63% of 108 were employed; 5% were in community-based mental retardation programs; and 2% were in prison/mental health facilities. The specific learning disabled student in this study was more likely to be employed, live independently, and be self-sufficient than were the educable mentally handicapped or mentally retarded. Supportive employment starts, according to

Rhodes (1986), when the labor of the individual is successfully marketed to an employer and a paid job is secured.

Although the current trend in work placement for individuals with a severely handicapping condition is competitive employment as opposed to the sheltered workshop, at present there is a lack of evidence that can give solid give support to this trend. In a pilot study (Lam, 1986), two random samples of developmentally disabled workers, one sample from sheltered workshops, the other from a supported work program were compared in terms of client characteristics, program effectiveness, cost effectiveness, and job satisfaction. In general, there appeared to be no differences among the two samples of clients in terms of IQ scores, Functional Assessment Inventory scores, and education. The results suggested that the sheltered workshop program was more effective than the supported work program in terms of the number of hours worked by the clients, with no differences in earnings. The results also suggested that it was more cost effective to serve individuals with borderline and mild mental retardation in the supported work program and those with moderate and severe mental retardation in the workshop program. Finally, clients in both programs expressed a high degree of job satisfaction. Based on the results of this study the following recommendations were made: (1) Since the sheltered workshop program provided its clients with a more extensive work schedule, it may better meet the needs of clients who work better with this kind of structure than a supported work program; (2) it may be most cost effective to serve clients with borderline-mild retardation under the supported work model which can often lead to competitive employment opportunities; and (3) rehabilitation professionals should inform clients, their parents, and special educational personnel who are requesting services about the different features of the two programs and assist them to choose the program that best meets the clients' personal needs.

There is some question as to whether Lam's (1986) sample met the present definition of supported employment since it was composed of individuals doing paid work as well as volunteer work, thus lowering the so-called supported employment group's earnings. The findings, however, merit consideration.

Summary and Synthesis--Vocational

With respect to the vocational training component of transition, the principal weakness of the literature is that it contains little that specifically relates to the effect that schools can exert considerable influence on persons in transition, especially with respect to their attitudes and expectations. But precisely how this influence can or should be implemented by the school is not elaborated.

In fact much of the literature, especially in Australia, tends to diminish the importance of education in the transition process. One study found no significant relationship between success and either intelligence or school achievement in the transition of mildly intellectually handicapped. Behavioral factors rather than job skills were the determinants in the employability of the mentally retarded. But how these behavioral patterns should be inculcated and through what curricular innovations are questions that demand further study.

There are frequent references to the fact that most handicapped find employment, no so much as a consequence of their vocational training pattern, as they do through the same family-friends-network that is used by the non-handicapped.

Living Arrangement

An independent living arrangement is not the sole criterion for attainment of adult status, but it is important. In fact, Wehman, Moon and McCarthy (1986), in a study of severely handicapped youth, suggested that living successfully in one's community, rather than obtaining employment, should be the main target of transitional services. In a six-year study of 167 mentally retarded persons who have been working competitively, Wehman, Hill, Hill, Brooke, Pendleton, and Britt (1985) noted that most high school leavers lived with their parents. Edgar, Levine, Dubey and Levine (1986) found the same percentage (71%) for handicapped as compared it with 65% for the non-handicapped person.

In a follow-up survey of 225 former clients of a rehabilitation center, Bolton, Rowland, Brookings, Cook, Taperek, and Short (1980) stated that 12 years after leaving high school almost two-thirds of the male ex-clients lived with their families; two-thirds of the females lived with parents, relatives or alone. In a four-year follow-up survey of 234 students completing special education services in 1978, Mithaug and Horiuchi (1983) noted that most of their respondents lived at home with their parents (64%) suggesting a pattern of financial instability and family dependence. In a statewide follow-up study of 243 mentally retarded youths who exited school between 1981 and 1983, Hasazi, Gordon, Roe, Hull, Finck, and Salembier (1985) found that the preponderance of youths lived with their parents (62%) and a small percentage lived independently (11%) or in residences operated by community mental health agencies (7%). They found no relationship between residential status and current employment status. However, Wehman, Kregel and Barcus (1985), in providing a model for vocational transition, reported outcomes of employment for 55 clients, indicated that prior to employment 92% were living with families and after training 85% lived at home. A somewhat more positive finding was that of Schalock (1986) who, in speaking of employment outcome for

secondary students, noted that of 108 pupils, 61% lived in supervised home or group home, 17% lived in semi-independent staffed apartment or dormitory, and 22% lived independently. The provision of low-cost housing for the handicapped, it seems, is a vital contribution of the government to independent living through Social Security Insurance (SSI).

A group of 300 individuals with mental retardation who had exited public school programs from 1979 through 1983 were investigated in terms of basic self-care, home management, community usage skills, use of free time and recreational leisure activities, and self-satisfaction (Kregel, et al., 1986). The results of the study indicated that almost all of the individuals investigated demonstrated some degree of competence in independent living skills in terms of basic self-care and home management; however, only 8% of the individuals actually lived independently. Many of the individuals possessed some degree of independent mobility, a majority of the social activities and interpersonal relationships reported by the respondents focused on passively oriented activities conducted within their own homes. Despite this lack of social interaction with other members of the community, the individuals surveyed appeared quite satisfied with their current lifestyle. Only 19 percent of the individuals expressed any degree of dissatisfaction with their current situation. However, lack of work skills, transportation, and money were cited as problems by more than 20 percent of those surveyed.

In Australia (Mann & Gregory, 1981), 13.2% or 1,941,000 persons were considered to be handicapped. Of this number, 94.7% lived in private homes and the rest were confined in institutions. Of the handicapped school-age persons, over 80% lived at home and attended regular schools although their teachers often had little formal preparation to deal with helping and evaluating young disabled persons in making the transition from school to work.

The Vocational Rehabilitation Amendments of 1954 began a period of accelerating concern for the post-school employment and community integration of handicapped individuals (Rusch, Chadsey-Rusch, White, & Gifford, 1985). Between 1954 and 1964, for example, federal grants for support of sheltered workshops rose from 6 to more than 150 in the United States (Nelson, 1971). Toward the end of that period, legislation was also enacted to establish community-based mental health and residential centers (PL 88-164, PL 89-105, PL 89-333 and PL 90-170) and was followed by federally subsidized income maintenance programs via Medicaid and Social Security in 1971 and 1972 (PL 92-323, PL 92-603). Unfortunately, as Rusch et al. (1985) pointed out, such programs actually required a certain maintenance of disability because individuals were only eligible

for such support as long as they remained "inconsequential producers."

Subsequently, approximately 4,000 sheltered workshops and segregated community-based residential centers were constructed in the United States between 1960 and 1980 and an estimated 20,000 mentally retarded adults found themselves in programs which were designed to maintain some level of separation between handicapped individuals and the community mainstream. To compound the problem, handicapped individuals who might not require sheltered environments still often failed to receive the services required to facilitate their effective integration into vocational and community environments (Sailor & Guess, 1983).

The effect of these "sheltered environments" and poorly coordinated services is a stagnation of the movement of handicapped individuals toward competitive employment and effective community integration. In 1970, the U.S. Census revealed that 59% of the handicapped population were outside the labor force as compared to less than 41% of the nonhandicapped population (Phillips, 1977). That figure actually appears to have worsened by the early 1980s when the U.S. Census and the U.S. Commission on Civil Rights of 1983 estimated that between 50% and 80% of working age disabled adults were jobless.

In recent years, substantial effort has been made to integrate severely handicapped individuals into community settings (Novak & Heal, 1980). For example, federal legislation has provided financial support of opportunities for the handicapped (e.g., the Education of All Handicapped Children Act of 1975, the Rehabilitation Act of 1973, the Carl Perkins Act of 1984). Vocational preparation for productive work is one such opportunity emphasized in these laws. A U.S. Department of Labor report (1979) indicated that mentally retarded and other developmentally disabled adults make up 91 percent of those persons served as "inconsequential producers" by work activity centers, earning an average hourly wage of 43 cents. These dismal employment statistics indicate that adequate community integration of severely handicapped persons has yet to happen (Kokaska & Brolin, 1985; Rusch & Shultz, 1981).

The placement success and quality of life of 69 mentally retarded persons placed into independent housing five years previously was evaluated by Schalock, Harper, and Carver (1981). Eighty percent (n = 55) were still in their original independent housing placement. On the basis of multiple regression analysis, the most significant predictor variables were the behavioral skill areas of personal maintenance, communication, community integration, clothing care and use, and food preparation. Unsuccessful placements were related to bizarre behavior, nutritional problems, and inadequate home maintenance. Quality life variables analyzed included employment, finances,

community utilization, leisure-time usage, and friendship patterns. Analysis of the quality of life variables presented a mixed picture. Part of the data reflected low income and possible loneliness, on the other hand, community utilization occurred frequently and involved normal activities. Clients reported that they were proud of their apartments and felt good about doing their own thing.

Mentally retarded clients (n = 131) placed during a two-year period to either an independent living or competitive training program were evaluated as to placement success (Schalock & Harper, 1978). Thirteen percent returned to the training program. Successful independent living placement was related to intelligence and demonstrated skills in symbolic operations, personal maintenance, clothing care and use, socially appropriate behavior, and functional academics. Successful employment was related to sensorimotor, visual-auditory processing, language, and symbolic-operations skills. Major reasons for returning from a job to the competitive employment training program included: inappropriate behavior or need for more training, returning from community living placement which was related to money management, apartment cleanliness, social behavior, and meal preparation.

The extent of community and program success of 166 mentally retarded clients placed into a community-based program was evaluated over a nine-year period by Schalock, Harper, and Genung (1981). Twenty predictor variables measuring institutional factors, client characteristics, training variables, and community characteristics were related to community or program success. Successful community placement was associated with sensorimotor and work skills, appropriate social-emotional behavior, gender, family acceptance of community placement and, involvement with the interdisciplinary team process. Program success was associated with language and psychomotor skills, education received prior to community placement, community and institution size, and family involvement. Sixteen percent of the clients were reinstitutionalized into either the state mental retardation facility or a mental health facility.

The national longitudinal study of learning disabled youth examined the independent living arrangements of in-school youth to that of-out-of school youth (Wagner, 1988). Preliminary results indicate that of all learning disabled youth still in school, over 97% live at home with a parent or guardian. This figure drops significantly to 85% for those youth who have been out of school for up to one year and to 65% for those who have been out of school for over one year. For all "other" youth (i.e., youth who do not have a learning disability), only 53% who have been out of school for more than a year, are living with a parent or guardian. Moreover, of learning disabled youth

out of school for over a year, only 16% reported living with a spouse or roommate, which was significantly lower than the 39% reported for the non-learning disable youth.

Summary--Living Arrangement

There is general agreement in the literature on the personal skills necessary for a handicapped individual to live independently. There is, however, a surprising disagreement on the contribution that competitive employment makes to an individual's ability to establish an independent living arrangement.

Most of the data-based literature on the living styles of the handicapped also includes a doctrinaire acceptance of the value of special education programs in the development of the requisite skills.

Mobility

Mobility as an indicator of adult status is closely tied to economics. Here again, tax-supported transportation for the handicapped lessens the economic burden on the individual, making transition more attainable. The American ideal of owning and operating an automobile remains a strong social model related to the values of freedom and independence. Yet many handicapped youths have achieved virtual adult status even though they remain unavoidably dependent upon family or friends for transportation.

In surveying 300 individuals, Wehman, Kregel, and Seyfarth (1985) found that more than 50% of their subjects were dependent on others for transportation to and from their jobs, with 33% driven to work by a parent or friend and 9% riding a bus operated by a sheltered workshop. Of the total, 55% reported transporting themselves to and from work independently, with 29% driving themselves, and 16% using public transportation. Other modes of transportation included use of a carpool, bicycle, or by walking. A training program in transportation for moderately and severely retarded adolescence permitted some youth to move from mobility dependence to needing minimal assistance from their coworkers to travel to and from work (Clark, Greenwood, Abramowitz, & Bellamy, 1980).

Summary and Synthesis--Mobility

Access to competitive employment and the opportunity to live independently may both be conditioned by an individual's mobility within the community. Mobility, though a conditioned function of the handicapping condition, is partially due to the services available. The most restrictive situation exists when the individual depends upon others for transportation. The

least restrictive is when public or private transportation is available whenever needed.

Correlates of Employment

In addition to inquiring into the relationships of transition of handicapped individuals to type of employment, mobility, and living situation, other correlates have been investigated. Among these correlates can be found references to ability and adaptation, gender, type of handicapping condition, and ethnicity.

Mithaug and Hagmeier (1970) presented assessment data from 56 workshops, activity centers and developmental centers. The analysis showed that there is a functional relationship between job requisite, needs assessments, and training objectives. The paper indicated that these data can be empirically verified.

Sherman and Robinson (1982) edited the work of a panel on testing of handicapped people. It studied the psychometric, social, legal, economic, and ethical issues surrounding the use of standardized tests in making decisions about the education and employment of people with handicapping conditions. The report examines current testing and selection practices in schools and the workplace in order to describe the experiences of handicapped people and to determine, insofar as possible, the extent to which testing is a barrier to the full participation of handicapped people in American society. The report deals in depth with the legal and psychometric issues relating to the testing of people with handicapping conditions and to the testing requirements of the regulations implementing Section 504 of the Rehabilitation Act of 1973.

Theil (1981), reported the relationship of IQ, adaptive behavior, age, and environmental demand to community-placement success of mentally retarded adults. Successfully and unsuccessfully placed mentally retarded adults were compared on the basis of IQ, age, Adaptive Behavior Scale (ABS) Factors 1,2, and 3, and the ranking of program-setting demands. The ABS Factor 2 (Social Maladaptation), which is composed of behavior that challenges staff members' authority or threatens the health or safety of staff members or other clients, was the only measure that distinguished the groups. Successfully placed subjects exhibited lower levels of social maladaptation, suggesting that in order to improve chances for successful community placement, institution and community staff members should concentrate their efforts either on the reduction of socially maladaptive behavior or on the placement of more socially adaptive clients.

Among the reports on handicapping conditions, Buchanan and Wolf (1986) gathered data on 33 LD adults after they were referred

for career goal assessment. Only 9.1% were unemployed, but 39.4% were in post secondary situations. The women in the sample tended to have lower intellectual and achievement scores than did the males.

Twenty-one young adults who had received educational services for learning disabilities as young children were interviewed in regard to their adjustment by Fafard and Haubrich (1981). An interview technique was used to obtain: (a) demographic information, (b) school adjustment information, (c) vocational adjustment information, and (d) social adjustment information. Analysis of the results indicated that the majority of subjects: (1) had required additional supportive educational service throughout their schooling, (2) needed vocational assistance, and, (3) were often dependent on family support for social activities. The findings are discussed in terms of future investigation with learning disabled adolescents.

Although not an empirical study, Okolo and Sitlington (1986) reviewed recent studies of vocational adjustment of LD individuals and identified the skills needed for successful transition to the world of work. Current practices in secondary special education and vocational education were delineated. The authors concluded that secondary special education programs should provide six types of vocationally relevant activities: (a) occupational awareness, exploration, and basic work experience, (b) in-depth career/vocational assessment, (c) instruction in job-related academic skills, (d) instruction in job-related interpersonal skills, (e) support services to other disciplines involved in vocational programming, and (f) post-school placement and follow-up. Despite increasing interest in the transition of handicapped youth from school to post-secondary training and employment, available data indicated that few secondary-school special education programs provide relevant services.

An entry in the literature by Kochany and Keller (1980) presents a case-by-case analysis of persons with mental retardation who failed in competitive employment. They established the following categories as reasons for termination: lack of agency support, parental influence, supervisor vacillation, inappropriate social behavior, and poor attendance.

In a study designed to expand on the Kochany and Keller (1980) study, J. Hill, Wehman, M. Hill, and Goodall (1986) examined different reasons for job separation of individuals of varying levels of mental retardation. Longitudinal data of a 6-year job-placement study period showed that 107 separations had taken place for which clear reasons for the job loss could be identified. Of the 107 separations that occurred, 50% were caused by employee-related concerns and the other half were related to environmental reasons. Analysis of the data

indicated that the greatest number of separations (26%) was attributable to employee attitudinal problems. This group also had the highest mean IQ. The second major cause of separation (17.7%) came from an external force described as negative social-contextual reactions to the employee. The third major cause of separation (14%) was employee work-skill deficits and the fourth cause (13%), legitimate economic lay-offs due to downturns in the business cycle. These results showed an association of measured intelligence with nature of job separation. The data indicated that in this study persons with mild retardation who are terminated from a job frequently cause their own job separation due to skill or behavior/attitudinal deficits. In contrast, individuals with more significant deficits generally lose their job due to environmental factors.

The literature also addresses the correlates of ethnicity and gender on prevocational learning, transition, and subsequent employment. Bowe (1985) in his analysis of disabled women in America, noted that one working-age woman in every twelve was disabled. Of 74,672,000 women aged 16-64 and not in institutions, 6,319,000, or 8.5% were disabled. The average disabled woman was 51 years of age, had a high school level of education, did not work, and was not actively seeking employment. Her income from all sources was less than $3,000 in 1980. Women with work disabilities were, on average, slightly older than were disabled men and were much older than non-disabled women.

A report including a profile of the working-age disabled population, with a breakdown of this group by severity of disability, race, marital status, age, amount of education, and employment status was provided by Burkhauser and Haveman (1982). Disability was found to be more prevalent among women than men and this disparity increases with the severity of disability. Disabled blacks were found to have a lower median age than disabled whites. Also included is an overview of public policy toward the working-age disabled and programs offered, such as income support, Social Security, workman's compensation, and the Vocational Rehabilitation Program.

An analysis of the unemployment experience of white and non-white male heads of household was conducted by DiPrete (1981) using methods of partial likelihood. The results showed job tenure to be the most important determinant of unemployment experience, but pointed to the complications involved in interpreting its effects when the sample studied had mixed levels of age and job quality. Non-whites differed in unemployment experience from whites primarily at low tenure levels, but they tended to be more sensitive to recessions at higher levels of tenure as well. Results revealed that the frequency of unemployment intervals diminished with age and with increased job tenure. The tenure of employment in present job

was found to be a strong indicator of likelihood of an interval of unemployment. For white males a job separation in the previous year predicts over six times as high an unemployment probability as that for a worker with over five years of tenure. For a non-white worker, this probability was found to be 19 times as high. Wages tended to be a stronger indicator of job security for non-whites than for whites. The same proportionate increase in wages implies a greater security return for non-whites than for whites.

Bowe's (1985) report compiled from bureau data for black adults concluded that: (1) disability was markedly more common among black adults than it was among whites or Hispanics; (2) of 16,157,000 black adults aged 16-64 and not in institutions, 2,280,00, or 14.1% were disabled; and (3), most disabled blacks of working age were women. The average disabled black adult was 42 years old, had less than a high school level of education, was unemployed, and was not actively seeking employment. Income from all sources was $3,000 in 1980.

Bowe (1985) presented data which helped describe Hispanics of working age who reported one or more work disabilities. The average disabled Hispanic of working age was 40 years old, had a ninth-grade level education, did not work, and was not actively seeking employment. Almost half of all disabled Hispanics of working age were between 45 and 64 years old. Income from all sources was under $4,000 in 1980.

In discussing the ethnic dilemma in social services, Jenkins (1981) noted common problems. These included: lack of recognition on the part of planners and practitioners of the diversity of ethnic patterns and cultures of the client population, lack of appreciation of language differences, the persistence of stereotypes and, the threat to the survival of the group as a cultural entity. Following discussion, data collected from interviews with ethnic agency directors, field visits, and from observations were presented. Areas of success in service delivery included: bilingual-bicultural programs, and supportive services to families. Common areas of failure were groups, whether for therapy or other treatment, particularly for teenagers where a one-to-one basis was seen as much better. Appendixes of statistical tables supporting findings were included, as well as examinations of ethnic service delivery in Israel and Britain.

Summary

It is of interest to note that the special education literature on job placement and tenure makes little reference to the large body of research on youth employment in general, nor does this literature acknowledge the differential lengths of tenure across occupations. The findings that race, ethnicity, age, sex, and

economic fluctuations are correlates of employment and tenure are in complete agreement with studies of youth in general.

Discussion

The literature emanating from the 1960s characterized the term transition as the process of moving from childhood to adolescence. In the 1970s transition literature focused on the importance of the shift from school to work, a process that was believed to be central to the development of the individual. In the 1980s the definition became more specific "a period six months prior to the date of leaving school, to the 30-month period after the date of leaving school." During this time the term became widely used by special education professionals to encompass the movement of youth to adulthood and to highlight the special problems of handicapped youth in the process of transition.

The literature of the last decade includes references to international as well as to national work which for the most part has centered on studies of the employment status of youth and in particular has focused on persons with disabilities. The consensus was that when effective vocational and other rehabilitative programs are in place, the cost factor was reduced.

In addition to employment preparation and work experience, the type of living arrangement appears to be important in the transition literature. The studies reported a wide range of living situations on a continuum from heavy dependence on families to total independence. The third factor, mobility, is closely tied to economics and employment. On the other hand, access to competitive employment and the opportunity to live: independently are both conditioned by the handicapped persons mobility within the community. There has been too little accomplished toward the goal of complete integration of the handicapped into the community. Failure may be due in part to the complexity of the interlocking pieces. In order to live independently some type of employment is necessary and employment presupposes some vocational preparation and other help in the transition from school to work. The literature suggests that there has been a renewal of effort to provide a curriculum that is designed to prepare individuals with special needs to make a successful transition from the world of school to that of work.

DEVELOPING A TYPOLOGY OF TRANSITION

Theories

Numerous authors postulate stages in the evolution of an individual's career. These theories fit the goals of transition research quite well in that they incorporate preparation, exploration, trial, stable, maintenance and decline periods in the career structure (Ginsberg, 1980). We have treated the various theories in a rather eclectic manner, selecting aspects of each to guide us. The sociological theories relating to job placement which look at the effects of significant others and networking as an important aspect of job finding and consider education as a credentialing and sorting mechanism add complementary items and permit an expansion of the research questions.

Definitions of Transition

Transition was defined by West and Newton (1983) as a period 6 months prior to the date of leaving school, to 30 months after the date of leaving.

The term "transition" meaning the movement from childhood to adolescence, appears in the literature prior to the 1960s as evidenced by Cohen (1964). A landmark publication (Hill, 1969), focusing on the transition from school to work expanded on the earlier concept of transition.

In 1970, Garbin, Salamone, Jackson and Ballweg focused on the adjustment problems of young workers as they faced the transition from school to work. Garbin et al. (1970) in discussing Lasswell's (1965) treatment of the transformation from youth idealism to adult realism reminds the reader that:

> The worker's occupational role influences not only his work activities, but also his prestige and his sense of belonging. The worker's social class position, more than any other factor, is affected by the type of work he does. His social class position, in turn, influences the life style of his immediate family, its health and longevity, the use of its leisure time, its social participation patterns, its political and religious behavior, its marital stability, its social values and attitudes, and innumerable other factors which are markedly influenced by the nature of the occupational pursuits of the breadwinner. (pp. 9-10)

The writers of this paper accept the term "transition" to mean a process of movement toward independent adulthood which, in some cases, may continue for years.

Elements of the Typology

A useful typology should focus on the most salient variables in the transition process and thus afford a means of assessing the extent to which individuals have made progress toward adult status. Theoretically this typology should be applicable to all youths in transition, including those classified as handicapped.

The typology should be sensitively designed so that any movement toward the goal of independence would be noted. When used with persons who have reached the age, if not the status, of adults, the typology should indicate whether the individuals had made reasonable progress toward a recognized goal of independence. The variables involved include three main categories: those of employment, living arrangement, and, mobility.

Employment

In western societies, the concept of adult status embraces all those factors which contribute to one's ability to become a member of the work force, and ultimately to gain economic self-sufficiency. For many individuals, however, the transition from youthful dependence to adult independence is not clearly demarcated. For example, some individuals who are not now employed do maintain adult status because they qualify for welfare which pays for room and board. Under the best conditions, youthful dependence should yield to adult status sustaining the social ideal. The federal emphasis on transition has, as a primary objective, the placement of handicapped individuals in competitive employment. The parents and guardians of handicapped youth agree with that objective, and have lobbied long and hard for the development of policies that support the rights of the handicapped to participate as fully as possible in adult society. The current literature addresses four types of employment, and each requires some definition.

Competitive employment. That employment which is not restricted to any identifiable group of individuals. Competitive employment implies that employers select their employees from the pool of existing labor and design the work and rewards to be sufficient to attract applicants.

Subsidized employment. There are a number of ways in which government subsidizes employers for hiring targeted groups of citizens. The most generally applicable form of subsidy comes as tax relief (Targeted Job Tax Credits) and is applicable to the graduates of Job Corps, Civilian Employment Training Act (CETA) programs, veteran groups, and the handicapped if they meet the criterion of being financially disadvantaged. The Department of Vocational Rehabilitation has a more direct subsidy for qualifying handicapped individuals that pays a

substantial part of the wages for a specified learning period while the worker comes into full production. Subsidized employment is intended to assist individuals in need of training and experience to qualify for competitive employment.

Supportive employment. A new concept applicable only to the handicapped is that of supportive employment. Supportive employment work stations include assistance to the employer and employee from off-work-site personnel in training and social adjustment to the workplace. Once again, the intent of supportive employment is to provide adults with disabilities the training and experience necessary for competitive employment. Within current definitions, supported employment may be less than full time and offer pay below the minimum wage, although it is assumed that more hours of work and higher rates of pay constitute desirable objectives. Less than half-time work is below the minimum standard for supportive employment. Supportive employment starts when the labor of the individual is successfully marketed to an employer and a paid job is secured (Rhodes, 1986).

Sheltered workshops. As the name implies, sheltered workshops are for individuals with rather severe handicapping conditions. The work atmosphere is supportive and quasi-production-oriented. With grants from tax-supported agencies or contract with private sector business or both, the handicapped in sheltered workshops receive modest compensation for the time spent in the work.

The Employment Element in the Typology

The employment factor in the typology of transition consists of seven categories which are:

1. Unemployed
2. Sheltered workshop/low earnings
3. Sheltered workshop/high earnings
4. Subsidized or supportive employment/low earnings
5. Subsidized or supportive employment/high earnings
6. Competitive employment/low earnings
7. Competitive employment/high earnings

Sheltered workshops offer a first step towards competitive employment. Great differences exist between sheltered workshops and the various assignments within a particular workshop. Such differences may range from a simple social-interaction setting to one that is strongly production-oriented. In this typology a distinction has been made between sheltered workshops on the basis of earning capacity, and this distinction is used throughout the categories of employment status. Earnings must be dichotomized into high and low in a fashion that goes beyond hourly wage and includes the number of hours worked at that

wage. The dividing line between high and low earnings may vary by region and across time. The movement along the continuum proceeds from unemployed through subsidized or supportive work with low income, subsidized or supportive work with high income, to competitive work with low income, and finally to competitive with high income.

Living Arrangement

An independent living arrangement is not the sole criterion for attainment of adult status, but it is important. In fact, Wehman, Moon and McCarthy (1986), in a study of severely handicapped youth, suggested that living successfully in one's community, rather than obtaining employment, should be the main target of transitional services. For the handicapped a vital contribution of the government to independent living is achieved through Social Security Insurance (SSI).

Living arrangements may vary from situation to situation, as in a group home where food is prepared by others, household tasks are done by others, and someone is available practically all the time to monitor the well-being of the resident. A modest movement toward independent living would be indicated by someone who lives in a group home but participates in the tasks necessary for household maintenance.

A home where the family assumes most of the duties of a group home staff offers occasions when the family must leave the dependent individual to care for him/herself, if only for a short period of time. In this typology, group homes and family housing are treated as different arrangements with the family living arrangement being slightly more independent. When individuals contribute to the completion of household tasks, they are considered to be even more independent in their living arrangements.

The next step toward independent living is to live alone or with a roommate (friend or spouse), with no participation in household tasks. Services provided by Rotary and other clubs permit some arrangements to occur that alter the schema somewhat. For example, an individual may live alone and not be responsible for the household tasks if there are periodic visits from service-minded citizens who take care of the standard chores. The final step in the movement toward independent living is to live alone or with a friend or spouse and assume part of the responsibility for maintaining the living environment.

The Living Arrangement Element in the Typology

The six categories of independent living range then from group living with no contribution to the maintenance of the home, to

living alone or with a friend or spouse and assisting with the household tasks. The living continuum ranges across these six categories :

1. Living in a group home performing none of the chores.
2. Living in a group home and assisting with the chores.
3. Living with family or friends and performing none of the household chores.
4. Living with family or friends and assisting with the household chores.
5. Living alone or with a roommate or spouse and performing none of the household chores.
6. Living alone or with a roommate or spouse and assisting with the household chores.

Mobility

Mobility as an indicator of adult status is closely tied to economics. Here again, tax-supported transportation for the handicapped lessens the economic burden on the individual, making transition more attainable. The American ideal of owning and operating an automobile remains a strong social model related to the values of freedom and independence. Yet many handicapped youths have achieved virtual adult status even though they remain unavoidably dependent upon family or friends for transportation.

Movement within and about the community permits or inhibits a variety of activities for individuals. When individuals are dependent upon others for conveyance, they must be considered as mobility dependent. Included in this category are severely mentally retarded and severely orthopedically impaired individuals who cannot drive vehicles themselves, and who need constant attention from family, friends, and other assistants. The ultimate mobility independence, in our society, means the ability to drive a vehicle by oneself. Being able to access public transportation on one's own provides some mobility independence, but imposes the constraints of schedules and routes. Other self-selected and self-directed forms of travel include riding bicycles and walking.

Access to competitive employment and the opportunity to live independently may both be conditioned by an individual's mobility within the community. Mobility, though a conditioned function of the handicapping condition, is partially due to of the services available. The most restrictive situation exists when the individual depends upon others for transportation. The least restrictive is when public or private transportation is available when needed.

The Mobility Element in the Typology

The typology of transition being presented and tested in this paper contains four categories of mobility which represent a continuum from mobility independent (drives a car) to mobility dependent (requires others for transport).

Combining the Elements in a Typology

The combination of aspects of job acquisition, living arrangements, and mobility into a single typology form the basis for this paper. It is feasible that this typology can be used by practitioners to assess the progress an individual with a handicapping condition has made from youthful dependence toward the sociologically ideal status of adult independence. Transition, as defined in federal acts relating to youth with handicapping conditions, centers on independence from financial support of tax supported agencies. Competitive employment and managing to live and function in the community without assistance would indicate attainment of this independence.

Combining the Factors to Measure Transition

The typology that results from the three variables of employment status, living arrangements, and mobility is a 4 x 6 x 7 set of categories in which an individual can proceed in one, two, or three directions with each movement, indicating some progress in effecting the transition to independent living.

Figure 1 illustrates how the three factors are combined into one numeric indicator of movement. The rationale for the numeric indicator is based on the assumption that movement along any one of the three axes is evidence of movement toward the goal of employment and independent living. The numeric indices are considered to be rank-ordered and capable of statistical manipulation.

An Application of the Typology

The TROPHY project collected longitudinal data on 120 subjects. These subjects were assembled from a variety of sources. A few subjects were 1985 graduates of a suburban high school in the Puget Sound area of Washington (N = 7); others represented the 1985 leavers from the Honolulu School District (N = 36). A sample of 1985 leavers from the University of Washington Employment Training Program yielded a group of mildly and moderately retarded adults (N = 34). The DVR office in Fairbanks, Alaska cooperated in locating and interviewing orthopedically impaired adults (N = 12). Seattle Community College assisted in locating visually impaired adults who had completed a program for interpreters (N =

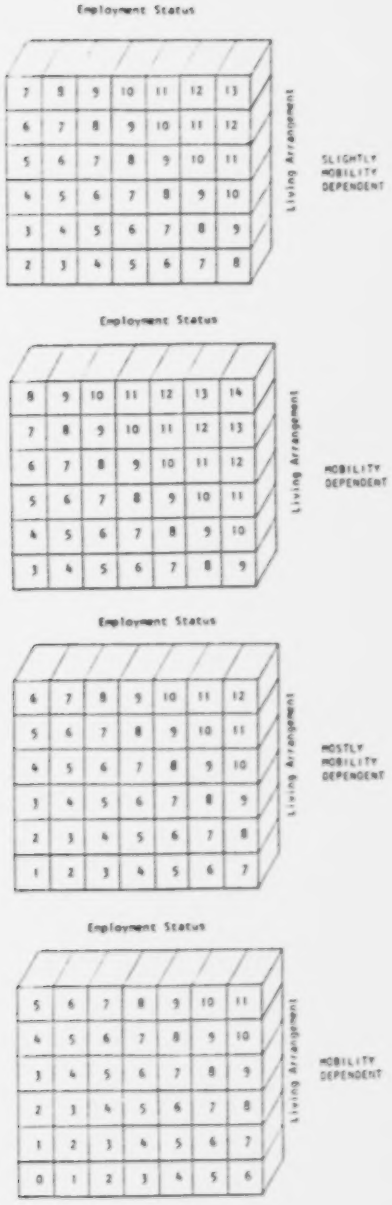
Employment Status
7 8 9 10 11 12 13
6 7 8 9 10 11 12
5 6 7 8 9 10 11
4 5 6 7 8 9 10
3 4 5 6 7 8 9
2 3 4 5 6 7 8
Living Arrangement
SLIGHTLY MOBILITY DEPENDENT
Employment Status
8 9 10 11 12 13 14
7 8 9 10 11 12 13
6 7 8 9 10 11 12
5 6 7 8 9 10 11
4 5 6 7 8 9 10
3 4 5 6 7 8 9
Living Arrangement
MOBILITY DEPENDENT
Employment Status
6 7 8 9 10 11 12
5 6 7 8 9 10 11
4 5 6 7 8 9 10
3 4 5 6 7 8 9
2 3 4 5 6 7 8
1 2 3 4 5 6 7
Living Arrangement
MOSTLY MOBILITY DEPENDENT
Employment Status
5 6 7 8 9 10 11
4 5 6 7 8 9 10
3 4 5 6 7 8 9
2 3 4 5 6 7 8
1 2 3 4 5 6 7
0 1 2 3 4 5 6
Living Arrangement
MOBILITY DEPENDENT

FIGURE 1. EXPLODED ISOMETRIC WITH VALUES IN THE CELLS FROM 1 TO 14.

7). Additional subjects were identified through service agencies in the greater Seattle area and from a random selection of employers throughout Washington state.

Data were provided by the subject in a personal interview. Each subject was interviewed three times, once in 1986, once in 1987 and again in 1988. The interview results were recorded on a protocol. (See Appendix A for the interview protocol and the coding formats.)

To apply the typology to the subjects for whom data were available in this study, it was necessary first to decide on and defend a cutting point for high and low earnings. To do this, the federal definition of poverty for the earning period represented by the data was used as a starting point. This definition placed single persons earning less than $5,500 a year as living in poverty. This resulted in a weekly rate of $106 which was lower than the federal minimum wage times 36 hours a week which is the cut off figure for underemployment. The minimum wage of $3.35 times 36 hours resulted in $120.50 a week or $6,266 a year. At the same time, the median income for a single person (independent of sex) is over $17,000 a year. It was therefore decided to select a point half way between poverty and the median income as a reasonable measure of having made the transition to adulthood. This represents $5.40 an hour for 40 hours a week or $216 a week.

The discussion that follows presents a descriptive analysis of the subjects in this study and tests the viability of the Transition Typology for understanding relationships among the variables that may effect transition.

Distribution of Handicapping Conditions of Respondents

During the interview the respondents were classified by disability codes used by the Washington State DVR. The subjects were distributed across 24 different codes. The DVR codes included finer distinctions than are typically used by the schools in classifying students. The number of cases in some categories were small and required that combinations be used in these analyses.

A majority of the subjects were born with a handicapping condition (n = 84), but 11 became handicapped after reaching the age of high school completion. The following cross-tabulation (Table 1) displays the age of onset by handicapping condition.

One important aspect of the age of onset of the handicapping condition is that not all the respondents were candidates for special education classes in the common schools. Of the 86 who were handicapped at birth or prior to the age of preschool,

TABLE 1

HANDICAPPING CONDITION BY AGE OF ONSET

	Age at Onset				
Hdcp. Cond.	At Birth	1-10 Yrs	11-20 Yrs	Over 21	Totals
Visually Impaired	4	2	1	4	12
Hearing Impaired	9	3	0	0	13
Cerebral Palsy	3	0	0	0	3
Orthoped. Impaired	6	1	3	4	15
Learning Disabled	15	0	5	0	25
Mentally Retarded	37	0	0	0	43
Epileptic	1	0	2	1	5
Emotional Disturbed	1	0	2	1	4
Totals	84	10	15	11	120

only 30 were in special education in preschool. The number increased by age or grade until 98 were enrolled at the high school level. There were no cases where special education ceased once it had begun. This permitted the investigators in this study to use enrollment in special education at the high school level as an indicator of services provided, without risk of omitting subjects.

All high school students in metropolitan areas have an opportunity to enroll in vocational education, and 60 of the respondents had done so at some time during their high school years. The program of study in which the respondents were enrolled was coded, using the U.S. Department of Education vocational education codes. Accordingly, in later analyses, the

relationship of those studies to subsequent employment could be tested. Twenty-two different vocational areas were represented by the respondents.

The median age of the respondents was 23 years. Sixty-one of the respondents were female and 59 were male. These data are provided to give the reader an indication of the diversity of the respondents and to illustrate that, for most of them, there had been ample time since leaving high school to have experience in the labor market.

Types of Employment for This Sample

Table 2 displays the respondents by handicapping condition and employment status. The proportion of this sample which was

TABLE 2

HANDICAPPING CONDITION BY TYPES OF CURRENT EMPLOYMENT

Hdcp. Cond.	Comp	Subsd	Supp	Shltrd	Unemp	Totals
Visually Impaired	8	1	0	2	1	12
Hearing Impaired	8	0	0	0	5	13
Cerebral Palsy	0	2	0	0	1	3
Orthoped Impaired	2	1	0	5	7	15
Learning Impaired	18	1	0	0	6	25
Mentally Retarded	18	2	4	7	11	42
Epileptic	5	1	0	0	0	6
Emotional Disturbed	1	0	0	0	3	4
Total	60	8	4	14	34	120

employed at the time of the last interview (72%) is slightly higher other studies of the employment status of the handicapped. However, if those working in sheltered workshops are removed from the ranks of the employed, the percentage drops to 60% which is consistent with other studies.

It is common to distinguish between full-time and part-time work. The Department of Labor uses the number of hours worked as a definition of under-employment. Anyone who works less than 36 hours a week is considered to be under-employed. One of the shortcomings of many research reports in special education has been that there is no distinction made between being employed 40 or 5 hours per week.

In Table 3 the hours worked by type of employment is presented. It is apparent that those subjects who are competitively employed work a greater number of hours.

TABLE 3

HOURS WORKED BY TYPE OF EMPLOYMENT

Category	>10	11-20	21-30	31-up	totals
Competitive	6	13	6	35	60
Subsidized	1	0	1	6	8
Sheltered	1	1	8	4	14
Supported	0	1	2	1	4
Totals	8	15	17	46	86

The subjects in the current study held or had at one time held jobs that were distributed across the DOT codes which are listed on pages 41-42.

Data on Job Employment Outcome

A justification for students working part time while in school is that it contributes to the transition from school to work and acquaints them with adult working role models. In the special education literature, emerging pressure is expressed for cooperative school and work placement for students with handicapping conditions.

LIST OF DOT CODES AND JOB NAMES FOR SAMPLE AND MENTALLY RETARDED SUB-SAMPLE

DOT Code	Job Name	Freq. of Samp.	Freq. of MRs
020067	Mathematician	1	
022261	Lab Technician	1	
045107	Counselor	4	
078362	Med. Technician	1	
094227	Teacher (Blind)	1	
110117	Lawyer	1	
119267	Paralegal Asst.	1	
137267	Interpreter	2	
153227	Coach, Athletic	3	
159124	Camp Counselor, Recreation	1	
163167	Manager, Sales	1	
165067	Public Rel. Rep.	2	
169167	Admin. Assistant	1	
187167	Manager, Facilities	1	
195227	Social Ser. Prgm. Aide	3	
201162	Social Secretary, Clerical	1	
201362	Secretary	3	
203362	Clerk-Typist	3	
203582	Data Typist	3	
206362	File Clerk	4	
209562	Office Clerk	13	2
211362	Teller, Financial	1	
211462	Cashier	3	1
213362	Computer Operator	1	
216482	Accounting Clerk	1	
219367	Insurance Clerk	1	
221010	Production Clerk	1	
222387	Inventory Clerk	2	1
231587	Mail Clerk	1	
237367	Information Clerk	5	
239567	Office Helper	1	
249262	Info. Clerk (Insurance)	1	
249367	Credit Cd. Control Clerk	1	
270357	Sales Clerk (Household)	1	
275257	Sales Rep.	1	
279357	Sales Person	1	
295467	Boat Rental Clerk	2	
295477	Automobile Rental Clerk	1	
299137	Sales Supervisor	1	
299367	Stock Clerk	1	
299477	Deliverer-Merchandise	1	
301137	Housekeeper	1	1
301474	Houseworker, General	2	1
301687	Caretaker (Domestic)	6	1

DOT CODES (Continued)

DOT Code	Job Name	Freq. of Samp.	Freq. of MRs
311477	Waiter/Waitress	3	1
311677	Counter Attendant	4	1
313361	Apprentice Cook	4	
315361	Cook	1	
317684	Food/Bev. Preparation	2	2
317687	Cook Helper	1	
318687	Kitchen Helper	61	49
319677	Caterer Helper	2	1
323687	Cleaner, Housekeeping	4	2
329467	Attendant, Lodging	1	1
334374	Masseur/Masseuse	1	
359673	Chauffeur	1	
359677	Day Care Worker	3	
372667	Security Guard	2	
379667	Life Guard	1	
381137	Supervisor, Janitorial	1	
381687	Cleaner, Commercial	4	3
382664	Janitor	12	6
404687	Farm Worker, Field Crop	1	
405684	Gardener	1	1
405687	Hortic. Worker (Agri.)	2	1
539587	Laborer, Paper, Rags	1	1
569685	Wood Machine Operator	1	
601280	Machine Shop Worker	1	
620281	Mechanic	2	
620684	Mechanic Helper	1	
639681	Mechanic (Bicycle)	1	1
726281	Electronics Inspector	1	
726384	Electronics Assembler	1	1
769687	Woodworker	1	1
780684	Furniture Maker	1	
786682	Garment Maker	1	
809484	Frame Maker	1	
840381	Painter (Construction)	1	
862684	Laborer, Construction	1	
899381	Maintenance Worker (Bldg.)	1	
913367	Taxi Dispatcher	2	
913463	Taxi Driver	1	
913663	Chauffeur	1	
915467	Auto Service Station Attd.	1	
915473	Parking Lot Attendant	1	
929687	Laborer	1	1
	TOTALS	203	61

The number of DOT codes exceeds the number of subjects because some of the subjects held two or three jobs for which data were reported.

In this paper it is assumed that working part time is a movement toward independence and can be the beginning of transition. The justification for sheltered workshops, supportive employment, and subsidized employment includes the expectation that these social services lead to competitive employment. The data on the respondents in this study include the possibility of a current job, prior two jobs and two unemployed periods. These data also permit a brief career analysis to inspect the movement, if any, from sheltered workshops and subsidized employment into competitive employment (See Table 4.)

TABLE 4

CURRENT JOB BY PREVIOUS EXPERIENCE

Current Job	Comp	Sub	Sup	Shel	Unem	Nilf	Totals
Competitive	38	5	4	0	10	3	60
Subsidized	3	3	1	0	1	0	8
Supportive	3	1	0	0	0	0	4
Sheltered	4	2	3	0	2	3	14
Unemployed	13	1	5	2	3	7	31
Not in labor force (nilf) (i.e., school)	1	0	0	0	0	2	3
Total	62	13	13	2	25	17	120

The value of career analysis, even one as simple as the current and previous labor market activity presented here, is that it permits some insights into change. Of the subjects currently employed in competitive jobs, 38 had previous experience in competitive jobs, 5 had been in a subsidized job immediately prior, 4 had been in a supportive work environment immediately

prior, and for 3 subjects this was their only labor force experience. These data exhibit modest support for the proposition that subsidized jobs and supportive work prepare the handicapped for competitive employment. However, the fact that 14 of this group were in sheltered workshops, whereas previously 2 had been, seems to challenge that proposition. A number of the subjects became handicapped after they reached maturity. The 4 individuals who were currently in sheltered workshops, but who had previously been in competitive employment were all orthopedically impaired due to occurrences after their labor force experience.

Current Living Arrangements

One of the elements of transition is independent living. Table 5 presents the distribution of living arrangements by handicapping condition.

TABLE 5

CURRENT LIVING ARRANGEMENTS BY

HANDICAPPING CONDITION

Handcp. Cond.	Group Home	Fam./ Friends	Shared Housing	Spouse	Alone	Total
Visually Impaired	0	7	1	2	2	12
Hearing Impaired	0	4	7	1	1	13
Cerebral Palsy	0	3	0	0	0	3
Orthoped. Impaired	0	9	2	0	4	15
Learning Disabled	0	17	4	1	3	25
Mentally Retarded	4	24	7	1	6	43
Epileptic	0	0	0	1	5	6
Emot. Disturbed	1	2	0	0	1	4
Totals	5	66	21	6	22	120

As with all people the change of living arrangements from family to other more independent living is a function of age. Offspring leave the nest at different ages dependent upon factors such as schooling, ability to support themselves, and undoubtedly the severity of the handicapping condition. The distribution of living arrangements by age is presented in Table 6.

TABLE 6

CURRENT LIVING ARRANGEMENTS BY AGE

Living Arrangement	20 & Under	21 to 30	31+	Totals
Family/ Friends	21	33	12	66
Group Home	0	5	0	5
Shared Housing	4	13	4	21
Spouse	1	2	3	6
Alone	3	7	12	22
Totals	29	60	31	120

The category "living alone" seems to change directly with age while living with family and friends ins inversely related to age.

The cross-tabulation of living arrangements and current job type is presented in Table 7 with the recognition that earning capacity may well determine the living arrangements available to an individual.

Table 8 presents a cross-tabulation of mobility independence/ dependence by handicapping condition. As one would expect there is a relationship between the type of handicap and the level of mobility independence. Given the definition of mobility used in this typology, mobility may also be related to age and employment status in that driving one's own vehicle requires a considerable investment.

TABLE 7

CURRENT LIVING ARRANGEMENT

BY CURRENT JOB TYPE

Living Arrang.	Compet.	Subsdsd.	Shelter Workshop	Support	Unemp.	Totals
Group Home	2	0	1	0	2	5
Family/ Friends	33	5	8	3	17	66
Shared Housing	9	0	3	1	8	21
Spouse	5	0	0	0	1	6
Alone	11	1	2	0	6	22
Totals	60	8	14	4	34	120

TABLE 8

HANDICAPPING CONDITION BY MODE

OF TRANSPORTATION

Handicapping Condition	Dependent	Mostly Dependent	Slightly Dependent	Independent	Totals
Visually Impaired	2	3	1	0	6
Hearing Impaired	2	2	3	3	10
Cerebral Palsy	0	2	1	0	3
Orthoped. Impaired	6	1	0	1	8
Learning Disabled	5	8	4	7	24
Mentally Retarded	5	31	4	2	42
Epileptic	0	2	0	1	3
Emot. Disturbed	1	3	0	0	4
Totals	21	52	13	14	100

Summary

The foregoing discussion presented the variables included in our transition typology and the rationale for their categorization. With that and the cross-tabulations presented we are ready for the analysis of variables that may contribute to differential success of transition.

An Analysis of Subject Pool Used for the Typology of Transition

Some subjects in the 120 cases analyzed became handicapped after they had completed their common schooling and therefore it would be reasonable that special education could not have played a part in their preparation for transition. Sixteen cases were deleted on this basis. There are also subjects who are still enrolled in institutions of higher education and thus have not, as yet, entered the labor force. Three subjects were deleted on this basis. A third group excluded were those who, although handicapped at an early age, attended school sufficiently far in the past that special education services were not available to them. One 70 year-old subject was deleted on this basis. The residual group of 100 subjects was retained for analyses.

Eighteen variables were considered for use to empirically determine if the typology of transition could be predicted from other data about the subjects. The coefficients reported after each variable is the Pearson product moment correlation between that variable and the individuals score on the typology of transition. Correlations that showed a statistical significance at the .05 level with a two-tailed test are indicated by an asterisk.

100 Residual Cases

Familial Variables

1. Duncan's socioeconomic scale for the father's occupation, r = .066
2. Duncan's socioeconomic scale for the mother's occupation, r = .223*
3. Father's educational attainment, r = -.005
4. Mother's educational attainment, r = .098
5. Familial structure (intact/other), r = -.075

School Related Variables

1. Years of enrollment in special education, r = .001
2. Enrollment in vocational education, r = -.017
3. Months of post-high school education, r = .103

Post-High School Social Variables

1. Marital status, r = .190
2. Children, (Yes/No), r = .031

Personal Variables

1. Severity of handicapping condition, r = .118
2. Gender, r = .006
3. Age at time of the interview, r = .225*
4. Ethnic derivation, r = - .143

Social Service Variables

1. Current social service agency, (Yes/No) r = .339*
2. Prior social service agency, (Yes/No) r = .059
3. SSI funds received, r = - .046
4. Other non-wage funds received, r = .133

Some of the correlation coefficients reported above deserve comment. Mother's and father's socioeconomic status is typically significantly related to the employment status of their offspring. There is some conjecture that the relationship is due to the networking comparability of the higher socioeconomic parents and this networking benefits the offspring in job placement. The lack of a significant correlation between father's socioeconomic status and placement on the typology scale is difficult to explain, but could be due to the lessened need for employment of handicapped youth from the more affluent families. This explanation is in agreement with studies of the non-handicapped population (Schill, 1985; Boyd, 1988).

The familial structure used in this study categorized family as intact if the subject lived with both natural parents during the common schooling years, or not intact which included all other circumstances. Seventy-nine percent of the subjects in this

study were from intact families. This is in agreement with current data on clients at the University of Washington Child Development and Mental Retardation Center. The lack of a significant correlation between familial structure and the transition typology differs greatly from studies of non-handicapped high school youth where the familial structure has a very important relationship to youth employment (Boyd, 1988). Years of schooling is typically positively correlated with occupational status, however, in this population the years of schooling may well be defined by the severity of the handicapping condition and the age at which it is identified. Special education would claim that within a handicapping condition the longer a student spent under the special attention of qualified teachers the more likely that student would be to experience successful transition from school to independent living.

To accommodate consideration of the possible impact of degree of severity of handicapping condition a hierarchy was developed. The hierarchy, from most severe to least severe in terms of employability, was: multiple handicapped, moderately retarded, mildly retarded, hearing impaired, visually impaired, cerebral palsy, orthopedic impairment, learning disabled, and epileptic.

The significant relationship between age and placement on the transition typology scale follows the pattern of all youth. It is reasonable that handicapped youth work their way to better positions through time.

Predicting Employment Status

The 18 variables listed were used to try to predict the current employment status of the 100 subjects retained for analyses. The results of that discriminant analysis are shown in Table 9.

The discriminant functions correctly classified the subjects 39 percent of the time. When the diagonal is expanded to include placement within one place of the actual as being sufficiently accurate the prediction rate increased to 61 percent.

A similar analysis was conducted to try to predict current living arrangements (see Table 10). The discriminant functions correctly classified the subjects 50 percent of the time. When the diagonal is expanded to include placement within one place of the actual as being sufficiently accurate the prediction rate increased to 64 percent.

When the analysis was repeated for mobility categories the results were as shown in Table 11. The discriminant functions correctly classified the subjects 63 percent of the time. When the diagonal is expanded to include placement within one place of

TABLE 9

DISCRIMINANT ANALYSIS PREDITING CURRENT

EMPLOYMENT STATUS

Typology Groups	"N"	All Handicapping Conditions Predicted Groups							
		0	1	2	3	4	5	6	Employment Status
0	29	13	6	2	2	0	4	2	
1	14	4	7	1	2	0	0	0	
2	2	0	1	1	0	0	0	0	
3	5	0	1	0	1	1	1	1	
4	1	0	0	0	0	1	0	0	
5	37	3	8	3	4	1	13	5	
6	12	1	0	1	2	2	3	3	
Total	100								

TABLE 10

DISCRIMINANT ANALYSIS PREDICTING

CURRENT LIVING ARRANGEMENTS

Typology Groups	"N"	All Handicapping Conditions Predicted Groups						
		0	1	2	3	4	5	Living Arrange.
0	2	2	0	0	0	0	0	
1	3	0	3	0	0	0	0	
2	11	3	0	6	0	0	2	
3	47	3	4	4	22	8	6	
4	2	0	0	0	0	2	0	
5	35	1	8	6	3	2	15	
Total	100							

TABLE 11

DISCRIMINANT ANALYSIS PREDICTING MOBILITY

Typology Groups	"N"	All Handicapping Conditions Predicted Groups				
		1	2	3	4	Mobility
0	21	16	3	1	1	
1	52	7	29	6	10	
2	13	1	4	8	0	
3	14	3	1	0	10	
Total	100					

the actual as being sufficiently accurate the prediction rate increased to 83 percent.

Discussion of Prediction of Employment, Living and Mobility

When the 18 variables are employed to try to predict placement of all of the subjects within the typology, which combines current employment status, living arrangements, and mobility, the results are as shown in Table 12.

The 18 variables included in the discriminant analysis predicted the typology category correctly for 45% of the cases overall. When the adjacent category was accepted as being sufficiently accurate, the correct classification percentage went up to 54%.

Restricting the analysis to those subjects who were mentally retarded or who were classified as learning disabled (see Table 13) had little effect on the ability of the variables to predict.

The 18 variables included in the discriminant analysis predicted the typology category correctly for 49% of the cases overall. When the adjacent category was accepted as being sufficiently accurate, the correct classification percentage went up to 52.

Restricting the analysis to only those subjects who were mentally retarded (see Table 14) increased the ability of the 18 variables to predict.

TABLE 12

DISCRIMINANT ANALYSIS OF VARIABLES

PREDICTING THE TYPOLOGY

Typology Groups	"N"	All Handicapping Conditions Predicted Groups												
		0	1	2	3	4	5	6	7	8	9	10	11	12
0	3	0	0	1	0	1	0	0	0	1	0	0	0	0
1	4	0	3	0	0	0	0	0	1	0	0	0	0	0
2	4	0	0	2	0	0	1	0	0	0	0	1	0	0
3	8	0	1	5	0	0	0	0	0	0	0	1	0	0
4	8	0	0	1	0	4	3	0	0	0	0	0	0	0
5	13	0	1	2	2	2	3	0	1	0	0	0	0	2
6	11	0	0	1	0	1	0	5	0	0	0	1	3	0
7	7	0	0	0	0	0	1	1	3	0	0	2	0	0
8	18	0	1	1	3	0	3	0	2	5	0	2	1	0
9	2	0	0	0	0	0	0	0	0	0	2	0	0	0
10	8	0	0	2	0	0	0	1	1	1	0	3	0	0
11	6	0	0	0	0	0	0	1	0	1	0	0	4	0
12	8	0	0	0	0	0	1	0	1	1	0	0	0	5
Total	100													

TABLE 13

DISCRIMINANT ANALYSIS OF VARIABLES

PREDICTING THE TYPOLOGY

Typology Groups	"N"	LD & MR Handicapping Conditions Only Predicted Groups												
		0	1	2	3	4	5	6	7	8	9	10	11	12
0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
1	1	0	1	0	0	0	0	0	0	0	0	0	0	0
2	2	0	0	2	0	0	0	0	0	0	0	0	0	0
3	7	0	0	0	4	0	0	1	0	1	0	1	0	0
4	5	0	0	1	0	3	0	1	0	0	0	0	0	0
5	10	0	0	3	0	2	2	0	1	2	0	0	0	0
6	7	0	0	0	0	1	1	4	0	0	0	1	0	0
7	3	0	0	0	0	0	0	0	2	0	0	1	0	0
8	14	0	0	2	5	1	1	0	0	3	0	2	0	0
9	1	0	0	0	0	0	0	0	0	0	0	1	0	0
10	7	0	0	0	0	0	1	0	0	0	0	6	0	0
11	3	0	0	1	0	0	0	0	0	0	0	0	2	0
12	5	0	0	1	0	0	0	1	0	1	0	0	0	2
Total	66													

TABLE 14

DISCRIMINANT ANALYSIS OF VARIABLES

PREDICTING THE TYPOLOGY

Typology Groups	"N"	MR Handcapping Condition Only Predicted Groups												
		0	1	2	3	4	5	6	7	8	9	10	11	12
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2	0	0	1	1	0	0	0	0	0	0	0	0	0
3	5	0	0	1	2	2	0	0	0	0	0	0	0	0
4	4	0	0	0	2	1	0	1	0	0	0	0	0	0
5	8	0	0	0	0	1	6	0	0	1	0	0	0	0
6	6	0	0	0	0	0	1	5	0	0	0	0	0	0
7	1	0	0	0	0	0	0	0	1	0	0	0	0	0
8	9	0	0	0	3	1	2	0	0	3	0	0	0	0
9	1	0	0	0	0	0	0	0	0	0	1	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	42													

The variables included in the discriminant analysis predicted the typology category correctly for 61% of the cases overall. When the adjacent category was accepted as being sufficiently accurate, the correct classification percentage went up to 69.

There was a theoretical structure for entering the 18 variables into the discriminant analyses. Five functions were considered as possible. These functions are reflected in the grouping of the variables presented earlier.

A total of ten of the 18 variables loaded in at least one of the analyses. Four variables entered into the discriminant function on all three analyses, whether or not the subject had high school vocational education, how many years of special education the subject had, marital status and whether or not the subject had dependent children. Three variables entered into the discriminant function for two analyses. The three were: father's socioeconomic status, whether or not the subject had a service agency, and the subjects ethnic derivation.

Analysis of the Function Structure Matrices

The structure matrices for the three groups studied showed very little consistency across groups These groups were: all subjects, learning disabled and mentally retarded subjects, and mentally retarded subjects only. When variables were considered within established functional groups (familial variables, school related variables, post-high school variables, personal variables and, social service variables) the structure becomes slightly more stable, but not impressively so. Because each group is a subset of the proceeding group, it would be logical to expect a good deal more structure stability across groups than was observed.

The factors that loaded at a minimum level of 0.35 for all subjects were:

High school vocational education (yes/no)
Age
Service agency (yes/no)
Children (yes/no)
Ethnic derivation (Caucasian/non-Caucasian)
Number of years of special education
Marital status
Father's occupational socioeconomic status
Mother's occupational socioeconomic status

The factors that loaded at a minimum level of 0.35 for the learning disabled/mentally retarded (LD/MR) group were:

High School vocational education (yes/no)
Years of special education
Marital status
Service agency (yes/no)
Children (yes/no)
Ethnic derivation (Caucasian/non-Caucasian)

The factors that loaded at a minimum level of 0.35 for the mentally retarded (MR) only group were:

High school vocational educational (yes/no)
Father's occupational socioeconomic status
Years of special education
Marital status
Months of post high school training
Children (yes/no)

The factors important to transition to an independent adult life style for the "all" group are essentially the same factors found important for the general population (Boyd, 1988). The exceptions to this are the presence or absence of children and

marital status which are possibly more a reflection of successful transition than a predictor. The presence of the "years of special education" variable could quite possible be due to the preponderance of MR and LD subjects in the sample (66%).

The variables appearing in all three groups, high school vocational education, years of special education, marital status and children again could be a reflection of the sample bias rather than the needs of other than MR and LD subjects. The presence or absence of a service agency, which loaded for both the "all" and "LD & MR" groups should not be interpreted as a phenomena of the handicapped population. The current literature on youth employment indicates that the single most important factor for youth becoming successfully employed is the presence of a "significant other" interfacing with the business community on his/her behalf.

The lack of continuity of variables across groups is in agreement with a great deal of the current transition literature. It indicates the necessity to work for individual solutions to problems of the handicapped. There does not seem to be an adequate thread of similarity between or among groups to bode well for the success of any system not based on individual plans (Gelg & Mizokawa, 1986). The findings would also seem to support the current move to mainstreaming of handicapped youth in the schools. The exception to the mainstreaming activity would appear to be with the mentally handicapped population. Special education would seem to be a significant factor in the successful transition of the mentally handicapped to an independent adult lifestyle.

Selected Bibliography

Alper, S. (1981). Utilizing community jobs in developing vocational curricula for severely handicapped youth. Education and Training of the Mentally Retarded, 16(3), 217-221.

Alper, S. (1985). Comparing employer and teacher identified entry-level job requisites of service occupations. Education and Training of the Mentally Retarded, 28(1), 89-96.

Azrin, N. H., & Philip, R. A. (1979). The Job Club Method for the job handicapped: A comparative outcome study. Rehabilitation Counseling Bulletin, 23(2), 144-155.

Bellamy, G. T., Rose, H., Wilson, D .J., & Clarke, J. (1982). Strategies for vocational preparation. In B. Wilcox & G .T. Bellamy (Eds.), Design of high school programs for severely handicapped students (pp. 139-152). Baltimore, MD: Paul H. Brookes.

Bolton, B., Rowland, P., Brookings, J., Cook, D., Taperek, P., & Short, H. (1980). Twelve years later: The vocational and psychosocial adjustment of former rehabilitation clients. Journal of Applied Rehabilitation Counseling, 2(3), 113-123.

Bordieri, J. E. & Comninei, M. E. (1987). Competitive Employment for workers with Disabilities: An International Perspective. Journal of Rehabilitation, (3), 51-57.

Bourbeau, P. E., Sowers, J., & Close, D. W. (1986). An experimental analysis of generalization of banking skills from classroom to bank settings in the community. Education and Training of the Mentally Retarded, 21, 98-106.

Boyd, W. E. (1988). An investigation of the possible relationship between employment of in-school youth and their school performance and attitude toward school. Unpublished dissertation, University of Washington, Seattle.

Bowe, F. (1983). Demography and disability. Hot Springs, AK: Arkansas Rehabilitation Research & Training Center.

Bowe, F. (1984). Accommodation circa 2,000. American Rehabilitation, 10(2), 3-4, 8.

Bowe, F. (1984). Micros and special education: Opening new worlds for the disabled. Popular Computing, 3(13), 121-123, 126-128.

Bowe, F. (1984). U.S. Census and disabled adults. (Based on data from 1980 Census--People 16-64 self-reported disability). Fayetteville: University of Arkansas, Arkansas Rehabilitation and Training Center.

Bowe, F. (1985). Black adults with disabilities: A statistical report drawn from census bureau data. Washington, DC: U.S. Government Printing Office.

Bowe, F. (1985). Disabled adults of Hispanic origin. Washington, DC: U.S. Government Printing Office.

Bowe, F. (1985). Disabled women in America. A statistical report drawn from census bureau data. Washington, DC: U.S. Government Printing Office.

Brinker, R. (1985). Curricula without recipes: A challenge to teachers and a promise to severely mentally retarded students. In D. Bricker & J. Fuller (Eds.), Severe mental retardation from theory to practice. Division on Mental Retardation, Council for Exceptional Children. Lancaster, PA: Lancaster Press.

Brown, L., Branston-McClean, M., Baumgart, D., Vincent, L., Falvey, M., & Schroeder, J. (1979). Using characteristics of current and subsequent least restrictive environments in the development of curricular content for severely handicapped students. AAESPH Review, 4(4), 407-424.

Brown, L., Falvey, M., Baumgart, D., Pumpian, I., Schroeder, J., & Gruenewald, L. (1980). Strategies for teaching chronological age appropriate functional skills to adolescent and young adult severely handicapped (Vol. 9). Madison, WI: Madison Metropolitan School District.

Brown, L., Nietupski, J., & Hamre-Nietupski, S. (1976). Criterion of ultimate functioning. In M. Thomas (Ed.) Hey, don't forget about me (pp. 2-15). Reston, VA: Council for Exceptional Children.

Buchanan, M., & Wolf, J. S. (1986). A comprehensive study of learning disabled adults. Journal of Learning Disabilities, 19(1), 34-38.

Burkhauser, R. V., & Haveman, R. H. (1982). Disability and work: The economics of American policy. Baltimore, MD: The Johns Hopkins University Press.

Campbell, R. T. (1983). Status attainment research: End of the beginning or beginning of the end? Sociology of Education, 56(1), 47-62.

Carter, M. P. (1962). Home, school and work. Oxford: Pergamon Press.

Clarke, J. Y., Greenwood, L. M., Abramowitz, D. B., Bellamy, G. T. (1980). Summer jobs for vocational preparation of moderately and severely retarded adolescents. Journal of the Association for the Severely Handicapped, 5(1), 24-37.

Clarke, J. Y., Greenwood, L. M., Abramowitz, D. B., & Bellamy, G. T. (1980). Summer jobs for vocational preparation of moderately and severely retarded adolescents. Journal of the Association for the Severely Handicapped, 5(1), 24-37.

Cohen, Y. A. (1964). The transition from childhood to adolescence. Chicago: Aldine Publishing Company.

DiPrete, T. A. (1981). Unemployment over the life cycle: Racial differences and the effect of changing economic conditions. American Journal of Sociology, 87(2), 286-306.

Edgar, E., Levine, P., Dubey, M., & Levine, R. (1986, July). Washington State follow along studies: The 1985 special education graduates--Students in transition. Unpublished manuscript, University of Washington.

Fafard, M. B., & Haubrich, P. A. (1981). Vocational and social adjustment of learning disabled young adults: A follow-up study. Learning Disability Quarterly, 4, 122-130.

Farley, R. C., & Akridge, R. L. (1987). Training in relationship skills and rehabilitation clients' behavior in career settings. Rehabilitation Counseling Bulletin, 148-155.

Farley, R. C., & Hinman, S. (1987). Enhancing the potential for employment of persons with disabilities: A comparison of two interventions. Rehabilitation Counseling Bulletin, 4-15.

Garbin, A. P., Salomone, J. J., Jackson, D. P., & Ballweg, J. A. (1970). Worker adjustment problems of youth in transition from high school to work. (Research and Development Series No. 43). Columbus, OH: Center for Vocational and Technical Education, Ohio State University.

Gelb, S. A., & Mizokawa, D. T. (1986). Special education and social structure: The commonality of "exceptionality." American Educational Research Journal, 23(4), 543-557.

Ginzberg, E. (1980). The school/work nexus: Transition of youth from school to work (Report No. ISBN-0-87367-425-1). Bloomington, Ind.: Phi Delta Kappa Educational Foundation.

Habeck, R. V. , Galvin, D. E., Frey, W. D., Chadderdon, L. M., & Tate, D. G. (Eds.). (1985). Economics and equity in employment of people with disabilities: International policies and practices: Proceedings from the symposium. East Lansing, MI: Michigan State University. (ERIC Document Reproduction Service No. ED 261 209)

Halpern, A. S. (1973). The impact of work study programs on employment of the mentally retarded: Some findings from two sources (Working paper No. 61). Eugene, OR: University of Oregon, Research and Training Center in Mental Retardation.

Halpern, A. S. (1973). General unemployment and vocational opportunities for EMR individuals. American Journal of Mental Deficiency, 78(2), 123-127.

Harmon, D. S. (1988). The validity of parents' assessments of their handicapped children's intelligence. Unpublished doctoral dissertation. University of Washington, Seattle.

Hasazi, S., Preskill, H., Gordon, L., & Collins, C. (1983). Factors associated with the employment status of handicapped youth. Paper presented at American Education Research Association, NY.

Hasazi, S., & York, R. (1978). Eleven steps to good teaching. Teaching Exceptional Children, 10, 63-66.

Hasazi, S. B. (1985). Facilitating transition from high school: Policies and practices. American Rehabilitation, 11(3), 9-11.

Hasazi, S. B., Gordon, L. R., & Roe, C. A. (1985). Factors associated with the employment status of handicapped youth exiting high school from 1979 to 1983. Exceptional Children, 51(6), 455-469.

Hasazi, S. B., Gordon, L. R., Roe, C. A., Finck, K., Hull, M., & Salembier, G. (1985). A statewide follow-up on post high school employment and residential status of students labeled "mentally retarded." Education and Training of the Mentally Retarded, 20(4), 222-234.

Hill, J.M.M. (1969). The transition from school to work. London: Tavistock Institute of Human Relations.

Hunter, P. N., & Zuger, R. R. (1979). Easing the transition from school to work for students with severe physical disabilities: A summer work experience. Rehabilitation Literature, 40(10), 298-304.

Jenkins, S. (1981). The ethnic dilemma in social services. New York: The Free Press.

Kallen, D., & Colton, S. (1980). Educational developments in Europe and North America since 1960 (Report No. ED-EPP-S.75). Paris: United Nations Educational, Science, and Cultural Organization. (ERIC Document Reproduction Service No. ED 203 443)

Kregel, J., Wehman, P., Seyfarth, J., & Marshall, K. (1986). Community integration of young adults with mental retardation: Transition from school to adulthood. Education and Training of the Mentally Retarded, 21, 35-42.

Krupp, J. (1987). Counseling with an increased awareness of the transition process. Counseling and Human Development, 19(7), 2-15.

Kutscher, R. K. (1984). Bridge to tomorrow: Education for the noncollegiate labor force. Occupational Outlook Quarterly, 28(2), 38-40.

Lam, C. S. (1986). Comparison of sheltered and supported work programs: A pilot study. Rehabilitation Counseling Bulletin, 67-80.

Laswell, T. (1965). Class and stratum: An introduction to concepts and research. Boston: Houghton Mifflin.

Linari, R. F., & Belmont, R. M. (1986). 2001: Employment odyssey or opportunity for persons with handicapping conditions? CDEI, 35, 34-40.

Low, N. P., & Crawshaw, B. W. (1985). Youth without housing: patterns of exclusion. The Australian Quarterly, 77-84.

Maizels, J. (1970). Adolescents' needs and the transition from school to work. London: Athlone Press.

Mann, W., & Gregory, A. (1981). The employment environment for mildly intellectually handicapped young people (Report No. ISBN-0-909931-14-3). Clayton, Victoria, Australia: Monash University. (ERIC Dcoument Reproduction Service No. ED 247 461)

Menken, W. J. (1978). Disability in the family. In Conference Proceedings: Second European Conference of Rehabilitation International; Disability in the Family. Brighton, England, September 18-21.

Mithaug, D., Hagmeier, L., & Haring, N. (1977). The relationship between training activities and job placement in

vocational education of the severely and profoundly handicapped. AAESPH Review, 2, 89-109.

Mithaug, D., & Hanawalt, D. (1978). The validation of procedures to assess prevocational task preferences in retarded adults. Journal of Applied Behavior Analysis, 11, 153-162.

Mithaug, D., & Horiuchi, C. (1983). Colorado statewide follow-up survey of special education students. Denver: Colorado State Department of Education.

Mithaug, D., Mar, D., Stewart, J., & McCalmon, D. (1980). Assessing prevocational competencies of profoundly, severely, and moderately retarded persons. Journal of the Association for the Severely Handicapped, 5(3), 270-284.

Mithaug, D. E. (1979). Negative employer attitudes toward hiring the handicapped: Fact or fiction? Journal of Contemporary Business, 8(4), 19-26.

Mithaug, D. E. (1979). The relation between programmed instruction and task analysis in the prevocational training of severely and profoundly handicapped persons. AAESPH Review, 4(2), 162-178.

Mithaug, D. E., & Hagmeier, L. D. (1978). The development of procedures to assess prevocational competencies of severely handicapped young adults. AAESPH Review, 3(2), 94-115.

Mithaug, D. E., Horiuchi, C. N., & Fanning, P. N. (1985). A report on the Colorado statewide follow-up survey of special education students. Exceptional Children, 51, 397-404.

Mithaug, D. E., Horiuchi, C. N., & McNulty, B. A. (1987). Parent reports on the transitions of students graduating from Colorado special education programs in 1978 and 1979. Study commissioned by the Colorado Department of Education.

Mithaug, D. E., & Mar, D. (1980). The relation between choosing and working prevocational tasks in two severely retarded young adults. Journal of Applied Behavior Analysis, 13, 177-182.

Mithaug, D. E., & Martin, J. E. (In press). Adaptability instruction: The goal of transitional programming. Exceptional Children.

Mithaug, D. E., Martin, J. E., & Agran, M. (1977). Adaptability instruction: The goal of transition programming. Exceptional Children, 53, 500-505.

Noble, J. H., Jr. (1984). Employment in the context of disability policy. In Economics and equity in employment of people with disabilities: International policies and practices. East Lansing, MI: International Symposium on the Employment of Disabled Peoples.

Novak, A. J., & Heal, L. W. (1980). Integration of developmentally disabled individuals into the community. Baltimore, MD: Paul H. Brookes.

Okolo, C. M., & Sitlington, P. (1986). The role of special education in LD adolescents' transition from school to work. Learning Disability Quarterly, 9, 141-155.

Oleksy-Ojikutu, A. E. (1986). The career time-line: A vocational counseling tool. The Career Development Quarterly, 35, 47-52.

Polle, D. L. (1987). Competitive employment of persons with severe physical disabilities: A multivariate analysis. Journal of Rehabilititation, 53, 20-25.

Rhodes, L. E. (1986). Industry-based structure employment: An option for severely handicapped people. Unpublished manuscript. University of Oregon.

Rhodes, L. E., & Valenta, L. (1985). Industry-based supported employment: An enclave approach. Journal of the Association for the Severely Handicapped, 10(1), 12-20.

Rusch, F. R., & Chadsey-Rusch, J. (1985). Employment for persons with severe handicaps: Curriculum development and coordination of services. Focus on Exceptional Children, 17(9), 1-8.

Rusch, F. R., Chadsey-Rusch, J., White, D., & Gifford, J. (1981). Programs for severely mentally retarded adults--Perspectives and methodologies. In D. Bricker & J. Fuller (Eds.), Severe mental retardation from theory to practice (pp. 119-140). Lancaster, PA: Lancaster Press.

Rusch, F. R., Schutz, R. P., & Agran, M. (1982). Validating entry-level survival skills for service occupations: Implications for curriculum development. Journal of the Association for the Severely Handicapped, 7(3), 32-41.

Sailor, W., & Guess, D. (1983). Severely handicapped students: An instructional design. Boston: Houghton-Mifflin Co.

Schalock, R. L., & Harper, R. S. (1978). Placement from community-based mental retardation programs: How well do

clients do? American Journal of Mental Deficiency, 83, 240-247.

Schalock, R. L., Harper, R. S., & Carver, G. (1981). Independent living placement: Five years later. American Journal of Mental Deficiency, 86(2), 170-177.

Schalock, R. L., Harper, R. S., & Genung, T. (1981). Community integration of mentally retarded adults: Community placement and program success. American Journal of Mental Deficiency, 80(5), 478-488.

Schalock, R. L. & Hill, M. (1986). Evaluating employment services. In (Eds.) W. E. Kreinan & J. A. Stark, Pathways to employment for adults with developmental disabilities (pp 285-302). Baltimore: Paul H. Brookes.

Schalock, R. L., & Lilley, M. A. (1986). Placement from community-based mental retardation programs: How well do clients do after 8 to 10 years? American Journal of Mental Deficiency, 90(6), 669-676.

Schalock, R. L., Wolzen, B., Ross, I., Elliott, B., Werbel, G., & Peterson, K. (1986). Post-secondary community placement of handicapped students: A five-year follow-up analysis. The Learning Disability Quarterly, 9, 295-303.

Scharff, D. E., & Hill, J.M.M. (1976). Between two worlds: Aspects of the transition from school to work. London: Careers Consultants Limited.

Schloss, P. J., McEwen, D., Lang, E., & Schwab, J. (1986). Progress: A model program for promoting school to work transition. Career Development for Exceptional Individuals, 35(9), 16-23.

Schreiner, J. (1978). Prediction of retarded adults' work performance through components of general ability. American Journal of Mental Deficiency, 83(1), 77-79.

Schutz, R., Jostes, K., Rusch, F., & Lamson, D. (1980). Acquisition transfer and social validation of two vocational skills in a competitive employment setting. Education and Training of the Mentally Retarded, 15, 306-311.

Schutz, R. P., & Rusch, F. R. (1982). Competitive employment toward employment integration for mentally retarded persons. In W. Kiernan & J. Stark (Eds.), Prevocational and vocational education for special needs youth (pp. 133-159). Baltimore, MD: Paul H. Brookes.

Sherman, S. W. & Robinson, N. M. (Eds.). (1982). Ability testing of handicapped people: Dilemma for government, science, and the public. Washington, DC: National Academy Press.

Stodden, R. A., & Browder, P. M. (1986). Community based competitive employment preparation of developmentally disabled person: A program description and evaluation. Education and Training of the Mentally Retarded, 21, 43-52.

Szymanski, E. M, & Parker, R. M. (1987). Supported employment research: A commentary. Rehabilitation Counseling Bulletin, 59-62.

Thiel, G. W. (1981). Relationship of IQ, adaptive behavior, age, and environmental demand to community-placement success of mentally retarded adults. American Journal of Mental Deficiency, 86(2), 208-211.

Wagner, M. (1988). The transition of learning disabled youth from secondary school to adult life: descriptive findings prepared for the 1988 Metting of the American Education Research Association. New Orleans, Louisiana. Unpublished.

Wehman, P. (1975). Behavioral self-control with the mentally retarded. Journal of Applied Rehabilitation Counseling, 6, 27-34.

Wehman, P. (1975). Toward a social skills curriculum for developmentally disabled clients in vocational settings. Rehabilitation Literature, 36(11), 342-348.

Wehman, P. (1981). An analysis and evaluation of the failures of severely disabled individuals in competitive employment. In P. Wehman (Ed.), Competitive employment: New horizons for severely disabled individuals (pp. 181-198). Baltimore, MD: Paul H. Brookes.

Wehman, P. (1981). Assessment of employability - An ecological approach. In P. Wehman (Ed.), Competitive employment new horizons for severely disabled individuals (pp. 17-43). Baltimore: Paul H. Brookes.

Wehman, P. (1981). Employer, co-worker, and parent perceptions of severely disabled workers. In P. Wehman (Ed.), Competitive employment: New horizons for severely disabled individuals (pp. 117-155). Baltimore, MD: Paul H. Brookes.

Wehman, P. (1981). Model programs in competitive employment. In P. Wehman (Ed.), Competitive employment: New horizons for severely disabled individuals (pp. 199-237). Baltimore, MD: Paul H. Brookes.

Wehman, P. (1981). Training for competitive employment. In P. Wehman (Ed.), Competitive employment: New horizons for severely disabled individuals (pp. 45-75). Baltimore, MD: Paul H. Brookes.

Wehman, P. (1986). Transition from school to adulthood for youth with severe handicaps. Focus on Exceptional Children, 18, 1-12.

Wehman, P., & Hill, J. (1982). Preparing severely and profoundly handicapped students to enter less restrictive environments. Journal of the Association for the Severely Handicapped, 7, 33-39.

Wehman, P., Hill, J., Goodall, P., Cleveland, P., Brooke, V., & Pentecost, J. (1982). Job placement and follow-up of moderately and severely handicapped individuals after three years. Journal of the Association for the Severely Handicapped, 7, 5-16.

Wehman, P., Hill, M., Hill, J., Brooke, V., Pendleton, P., & Britt, C. (1985). Competitive employment for persons with mental retardation: A follow-up six years later. Mental Retardation, 23, 274-281.

Wehman, P., Hill, J. W., & Koehler, F. (1979). Helping severely handicapped persons enter competitive employment. AAESPE Review, 4(3), 274-290.

Wehman, P., & Kregel, J. (1985). A supported work approach to competitive employment of individuals with moderate and severe handicaps. Journal of the Association for the Severely Handicapped, 10(1), 3-11.

Wehman, P., Kregel, J., & Barcus, T. (1985). From school to work: A Vocational transition model for handicapped students. In P. Wehman & J. W. Hill (Eds.), Competitive employment for persons with moderate and severe mental retardation: From research to practice (pp. 169-198). Richmond: Virginia Commonwealth University, Rehabilitation Research and Training Center.

Wehman, P., Kregel, J., & Barcus, T. (1985). From school to work: A Vocational transition model for handicapped students. Exceptional Children, 52(1), 25-37.

Wehman, P., Kregel, J., Barcus, J. M., & Schalock. (1986). Vocational transitions for students with developmental disabilities. In W. E. Kiernan and J. A. Stark (Eds.), Pathways to employment for adults with developmental disabilities, (pp 113-128). Baltimore: Paul H. Brookes.

Wehman, P., Kregal, J., & Seyfarth, J. (1985). Employment outlook for young adults with mental retardation. Rehabilitation Counseling Bulletin, 29(2), 90-99.

Wehman, P., Kregal, J., & Seyfarth, J. (1985). Transition from school to work for individuals with severe handicaps: A follow-up study. Journal of the Association for the Severely Handicapped, 10, 132-136.

Wehman, P., & McLaughlin, P. (1980). Domestic skills subdomain. In P. Wehman & P. McLaughlin (Eds.), Vocational curriculum for developmentally disabled persons (pp. 119-131). Baltimore, MD: University Park Press.

Wehman, P., & Melia, R. (1985). The job coach: Function in transitional and supported employment. American Rehabilitation, 11, 4-7.

Wehman, P. M., Moon, S., & McCarthy, P. (1986). Transition from school to adulthood for youth with severe handicaps. Focus on Exceptional Children, 18(5), 1-12.

Wehman, P., Renzaglia, A., & Bates, P. (1985). Functional living skills for moderately and severely handicapped individuals. Austin, TX: Pro-ed.

Wehman, P., Renzaglia, A., Berry, G., Schutz, R., & Karan, O. (1978). Developing a leisure skill repertoire in severely and profoundly handicapped persons. AAESPH Review, 3(3), 162-172.

Wehman, P., Rues, J., Cook, D., & Guess D. (1985). Transition from school to work for individuals with severe handicaps: A follow-up study. Journal of the Association for Persons with Severe Handicaps, 10(3), 132.

Wehman, P., & Schleien, S. (1980). Classroom techniques. Education and Training of the Mentally Retarded, 15, 50-57.

Wehman, P., Schutz, R., Bates, P., Renzaglia, A., & Karan, O. (1978). Self-management programs with mentally retarded workers: Implications for developing independent vocational behavior. British Journal of Social and Clinical Psychology, 17, 51-74.

Wehman, P., Wood-Pietruski, W., Everson, J., & Parent, W. (1985). American Rehabilitation, 7, 12-16.

Wershing, A., Gaylord-Ross, C., & Gaylord-Ross, R. (1986). Implementing a community-based vocational training model: A process for systems change. Education and Training of the Mentally Retarded, 21, 130-136.

West, M. A., & Newton, P. (1983). The transition from school to work. New York: Nichols Publishing Company.

Wilcox, B., & Bellamy, G. T. (1982). From school to what? Transition and adult services. In B. Wilcox & G. T. Bellamy (Eds.), Design of high school programs for severely handicapped students (pp. 99-120). Baltimore: Paul H. Brookes.

Will, M. (1983). OSERS programming for the transition of youth with disabilities: Bridges from school to working life. Alexandria, VA: ERIC Document Reproduction Service No. ED 256 132.

Williams, W., Vogelsberg, R. T., & Schutz, R. (1985). Programs for secondary-age severely handicapped youth. In D. Bricker & J. Fuller (Eds.), Severe mental retardation from theory to practice. Division on Mental Retardation, Council for Exceptional Children. Lancaster, PA: Lancaster Press.